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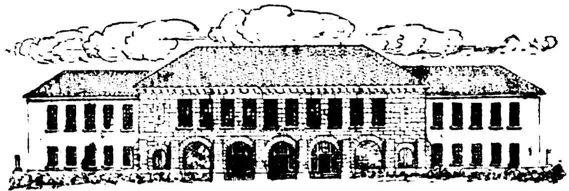

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BULLETIN, 1919, No. 35

THE JUNIOR COLLEGE

By

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STANFORD

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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THE JUNIOR COLLEGE.

Chapter I.

INTRODUCTION.

THE PURPOSE OF THIS INVESTIGATION.

American institutions are the expression of American spirit and American opportunity. Neither can be understood apart from the other. With an innate desire for freedom of expression and an unlimited opportunity for such, a variety of institutional life is inevitable. Everywhere in this country, individual, local, or denominational pride has worked to establish such institutions as best represented its own peculiar whims, beliefs, or needs. Witness the hundreds of schools and churches of our land. Under no other form of government would such a condition have been possible.

No one questions the value of this freedom of expression, for it constitutes the basis of American progress. As is usually the case, however, it has been gained at the expense of uniformity. Our institutions have varied as individuals and localities have varied. They have sprung into existence more or less spontaneously and quite independently of each other; and standardization, if it has come at all, has followed rather than preceded their establishment. As a result the student of American life seems ever to be confronted with the task of defining and standardizing institutions that already exist rather than of working out plans for those he may hope to establish in the future.

Nowhere is this more true than in the field of education. Witness our secondary schools and our colleges. These institutions are comparatively recent in origin. As a result of individual, denominational, and local pride, however, they have multiplied into the thousands. While in some respects they may be said to be the most typical and stable of American institutions, still they are undefined. Only comparatively recently has there been any significant attempt to standardize them. Even now we are not certain that our definitions and standards are correct. Monroe says:[1] "In our own country the views concerning secondary education are of the most diverse character, even among those who are specialists in this very field."

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[1] Monroe: Principles of Secondary Education, p. 1.

It is not surprising under these conditions that we should have, from time to time, more or less radical departures from the traditional form of secondary school and college. The junior high school on the one hand and the junior college on the other are both good examples of such variations. Here again we have institutions appearing more or less spontaneously as a result of individual whim or local need, and here again definition and standardization lag behind.

The term "junior college" is now widely accepted as applying to those institutions, either public or private, which offer the first two years of the standard college course, above and beyond the standard 15 units of high-school work. A variety of factors have, within the past few years, given an unusual significance to these particular years of our educational system. These will be considered at length in a later chapter.

The problem of standardizing the junior college and of perfecting its organization seems now to be pressing. There are more than 100 institutions calling themselves junior colleges. About 40 of them have been organized within the past three years. The median date for the organization of the 80 junior colleges considered in this investigation is 1915.

Of still greater importance than the rapid growth in number of these institutions is the fact that they seriously affect the present organization of secondary and higher education. The public junior college means an addition of two years to the traditional high-school course. The private junior college presupposes the limiting of the activities of the small college to two years of standard college work. It is clearly evident that if the junior college is accepted as a permanent feature of our educational system, it will involve a reorganization of our traditional institutions.

One of the foremost leaders of the junior-college movement, Dean Lange, of the University of California, suggests the following broad questions which he says are inseparable from the junior-college movement as a whole:[1]

> Shall certain colleges have their heads cut off, and, if so, by whom?
> Shall the American university college have its legs cut off, and, if so, where?
> Shall the American four-year school be stretched, and, if so, how?

If it be true that the junior college involves problems which so seriously affect the organization of secondary education, then certainly the rapid rise of these institutions during the past five years is a matter that should give educators much concern.

The junior college is in the experimental stage. We do not know what it should be, because we do not know exactly what it is.

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[1] Lange: The Junior College. Sch. Rev., vol. 25, September, 1917, p. 465.

Before we can see clearly what it is, we must know why it is. Fundamental to this and future discussions of this problem, it is necessary that we have, in the first place, a clear analysis of the forces that have contributed to the origin and development of this institution. In the second place, we must have detailed information as to the various types of junior colleges and the present status of such throughout the country. Third, as a necessary step toward standardization, we must have a summary of the present attempts at the accrediting of these institutions with an application of such to the conditions as found. The primary purpose of this investigation is to ascertain these facts. It is hoped that thereby a firm basis will be established for future discussions, and that light will be shed upon the problems peculiar to the organization and administration of these institutions. The certainty of a profound change in education following the war makes such data especially desirable and necessary.

The facts that have been collected will be presented in the chapters that follow under the following general heads:

I. Origin and Early Development of the Junior College Idea.
II. Influences Tending to Further the Development of the Junior College.
III. Present Status of the Various Types of Junior Colleges.
IV. Progress in the Accrediting of the Junior College.
VI. Problems of the Junior College in the Light of This Investigation.
VII. Summary and Conclusions.

METHOD OF INVESTIGATION AND SOURCES OF DATA.

The material upon which this report is based has been gathered from the following sources:

1. The large number of articles on the subject found in recent educational literature. These articles were often of a semipopular nature and were often based upon opinion rather than upon actual investigation. They served, however, in furnishing a clue as to the forces which have been operative in the development of these institutions, and furthermore have aided the writer in stating the problems which this investigation has attempted to solve.

2. In order to secure a more scientific basis for the consideration of these problems, a number of the recognized authorities in the fields of secondary, higher, and comparative education have been consulted. These will be referred to from time to time, and a list will be included in the bibliography.

3. Printed matter from the United States Bureau of Education, from the various State departments of education, and from the various colleges and universities of the country has been constantly available for reference.

4. The writer has been closely connected with the work of small colleges for a number of years both as a student and teacher. One entire year was devoted to an investigation of the problems peculiar to that type of institution. For the past five years he has been intimately connected with the organization and administration of a junior college. During that time every effort was made to keep in touch with the work of this institution from every angle. Personal visits and correspondence with other junior colleges have frequently been resorted to. This experience has served as a constant source of reference throughout this investigation.

5. To supplement this general information and personal experience, resort was had to the much-abused questionnaire method. Recognizing the weaknesses of this method, the writer has constantly guarded against any extreme interpretation of the results, and at times has refused to state any conclusion at all when the basis for such could only be found in manifestly unreliable returns.

In all, five different questionnaires were used. The first (Appendix A) was mailed by the Bureau of Education to 218 institutions. Some of these were known to be junior colleges, but a larger number were unclassified institutions the exact status of which was not known. This, no doubt, accounts for the relatively small per cent of replies. Of the 90 institutions which did reply, 14 stated that they could not properly be classified as junior colleges. The remaining 76 filled out the questionnaire more or less accurately. It is probable that this number represents 60 or 70 per cent of the well-established junior colleges in the United States at present.

The second form (Appendix B) was mailed by the substation of the Bureau of Education at the State University of Iowa to 60 of the leading colleges and universities of the country. Replies were received from 49 institutions, representing 40 States.

The third form (Appendix C) was mailed by the substation of the Bureau of Education at the State University of Iowa to the State superintendents of public instruction of each of the 48 States. Replies were received from 36 of these. It should be noted that, in combining the return of the last two questionnaires, every State in the Union is represented by at least one reply.

The remaining two blanks were used in collecting data from some of the standard colleges and universities in regard to the training, experience, and work of those who instruct freshman and sophomore classes. The first of these (Appendix D) was distributed among the instructors of the University of Iowa. Of the 74 who were offering instruction to first and second year students, 69 returned the questionnaire.

A similar form (Appendix E) was used in collecting data from the following institutions:

1. The State University of Illinois. In this case 135 questionnaires were mailed and 90 replies were received. This represents about 66 per cent of those instructing freshmen and sophomore students in this institution.

2. The University of Minnesota. Of the 110 questionnaires mailed to the instructors of this institution about 60 per cent were returned.

3. Cornell College. Questionnaires were distributed personally to 20 instructors, 16 of whom furnished the desired data.

4. Coe College. Questionnaires were distributed personally to 20 instructors, 16 of whom furnished the desired data.

5. Grinnell College. In this institution the registrar took charge of the work of distributing the questionnaires. Replies were received from 26 instructors, or about 63 per cent of those instructing first and second year students.

There are two probable sources of error in the results of these last questionnaires. In the first place, a considerable number of the instructors of each institution failed to reply. In no case, however, did this amount to more than 40 per cent of the total. In three cases it was 20 per cent or less. In the second place, conditions this year are abnormal on account of the war.

Many of the regular faculty of these institutions are in war service. This has necessitated many changes in programs, the combining of classes, etc., all which have no doubt affected the results. In several instances those replying to the questionnaires have called attention to these conditions. With these facts in mind, the writer has constantly guarded against any extreme interpretation of the results. At all events, we may presume that the war has affected all of the institutions alike and that conditions in the junior colleges are also more or less upset. On this point the reader is left to judge for himself.

Chapter II.

ORIGIN AND EARLY DEVELOPMENT OF THE JUNIOR COLLEGE.

For more than 30 years there has been, in the United States, a gradual evolution of the idea that the first and second years of the standard college or universitiy are distinctly secondary in character, differing alike in purpose, content, and organization from the later years of the period of higher education. To this period of two years, whether attached to the high school or left with the university, the name "junior college" has been applied and at present, in a number of States, seems quite generally accepted.

The suggestion of an extended period of secondary education no doubt comes from Europe. Since the days of John Sturm, at Strassburg, one may find secondary schools offering courses in secondary training which are 9 or 10 years in length. The present German gymnasium and the French lycée are typical of this class of institutions. Not only do they cover the later years of what we call elementary education, but they include an equivalent of the first two years of the American college as well. Graduates of the European secondary school, although no older than the graduates of our high schools, are two years in advance of the latter in scholastic training. Reference will be made to this point in a later chapter.

Although the evidences of the movement appear distinctly, it seems difficult to determine just when or where the idea was first suggested in the United States. We are told that Henry P. Tappan, in his first inaugural address as president of the University of Michigan in 1852, suggested the advisability of the transfer of the work of the secondary departments of the university to the high schools.[1]

Likewise Col. Folwell, at the outset of his career as president of the University of Minnesota, suggested that ultimately the secondary schools of the larger centers might well undertake the work of the freshmen and sophomore years of the university.[2]

In the early eighties President James made an unsuccessful attempt to interest the authorities of the University of Pennsylvania in this plan.[3]

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[1] Gray, A. A. The Junior College, p. 2. Quotes Hinsdale's History of University of Michigan, p. 43.

[2] Hill, A. Ross. Proc. Nat. Assoc. of Universities, vol. 13, 1915, pp. 122-143.

[3] Brush, H. R. School and Society, vol. 4, Sept. 2, 1916, pp. 357-365.

Since there appear to have been no immediate changes following ~~these~~ suggestions, we shall pass them as of historic interest only.

The first official recognition of the distinction between the early and later years of university work that we have record of is that at the University of Michigan in 1883. In that year there was introduced in the liberal arts department of the university what was known as the "university system." Under this regulation a student was required to choose by the beginning of his junior year one major and two minor subjects, and to submit himself a year and a half or two years later to a final examination over all of the ground covered. This examination was set by a committee of three representing his major and two minor subjects.[1]

This plan seems to have been abandoned a few years later, chiefly on account of administrative difficulties. We are told, however, that this institution agreed to accept work done above the twelfth grade in the better high schools of the State at full credit and that in the early nineties students were graduated in three years after doing the first year's work in a standard high school.[2]

Of far greater influence upon educational practice was the work of President Harper, of the University of Chicago. In fact we might well call that far-seeing educator the father of the junior college, for it is of him that the average individual thinks when the origin of that institution is mentioned.

When the University of Chicago opened its doors on October 1, 1892, William Rainey Harper became its first president. Under his influence the work of the freshman and sophomore years was given a distinct division of its own called the "Academic college." The work of the junior and senior years was combined into what was known as the "University college." Four years later, in 1896, these divisions were designated as "junior college" and "senior college," respectively.[3]

This distinction still exists, and has later been adopted by other universities.

This reorganization of the university was, however, only a beginning of President Harper's plan. From that point his influence was felt logically in two directions; in the high schools and in the small colleges scattered throughout the country. Though each of these problems will be given a separate chapter later, they will be discussed at this point, for out of them have developed two distinct types of junior colleges as we find them to-day.

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[1] Lange, A. F. Sierra Educational News, June, 1909.

[2] Ibid.

[3] Catalogues of University of Chicago, 1892-93 and 1896-97.

There can be no doubt as to President Harper's view in regard to the relation of the first two years of university work to the high school. He says:[1]

> The work of the freshman and sophomore years is only a continuation of the academy or high-school work. It is a continuation not only in subject matter studied, but in methods employed. It is not until the end of the sophomore year that the university methods of instruction may be employed to advantage. * * * At present this constructive period of preparation, covering six years, is broken at the end of the fourth year, and the student finds himself adrift. He has not reached a point when work in any preparatory subjects is finished.

For him this view was more than theory, for he made every effort to put in operation some plan of organization that would recognize these essential facts. In 1902, at the annual meeting of the schools affiliated with the University of Chicago, the opportunity presented itself. As chairman of that meeting he recommended that a committee be appointed to study the entire educational system with a view to the adoption of the following plan:[2]

> 1. The connecting of the work of the eighth grades of the elementary school with that of the secondary schools.
> 2. The extension of the work of the secondary schools to include the first two years of college work.
> 3. The reduction of the work of these seven years thus grouped together to six years.
> 4. To make it possible for the best class of students to do the work in five years.

One year later, at the seventeenth annual conference of the "Academies and High Schools Affiliating or Cooperating with the University of Chicago," the committee presented a majority report in favor of the extension of the high-school study to include two additional years. Another committee, representing seven large universities, also reported favorably on the plan.[3]

There can be little doubt that President Harper was thoroughly convinced of the wisdom of this move. Addressing the meeting of 1903, he said:[4]

> Ten years from now the high schools all over the country will have added a fifth and a sixth year and will be doing college work which now falls to the first two years of the college courses. In Minnesota and Michigan the State universities are accepting work done in many of the high schools for the first year of college study. I have no doubt that the high schools are going to do college work in the future.

Although more than 10 years have passed, it can hardly be said that the movement has gone as far as President Harper hoped. Nevertheless, his prophecy is being fulfilled at present in some sections of the country with amazing rapidity. A glance at the table presented in a later chapter will show the truth of this statement. That the high school may safely be intrusted with the first two years of college work seems to have been demonstrated by at least one institution

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[1] Harper, W. R. The Trend in Higher Education, p. 378.-79

[2] Harper, W. R. Sch. Rev., vol. 11, p. 1.

[3] Harper, W. R. Sch. Rev., vol. 12, p. 15.

[4] Rep. Commis. of Educ., 1903, p. 573.

(Joliet High School, organized junior college department, 1902), which under the direct influence and encouragement of President Harper added two years to its regular course. Later chapters will present many evidences of the permanency of this change.

A second direction of the influence of President Harper, as far as it concerns us here, was that relating to the small colleges. In 1900 in an address before the National Education Association he said:[1]

> In my opinion the two most serious problems of education requiring solution within the next quarter century are, first, the problem of the rural schools, which falls within the domain of lower education; and secondly, the problem of the small college, which lies within the domain of higher education. The second problem is at the same time serious and delicate, because the greatest interests, both material and spiritual, are at stake.

That the years since the utterance of this statement have found the problem of the small college to be both serious and delicate, no student of higher education will question. This fact will be discussed in a later chapter. The point of interest for us here is the remedy which that great educator suggested. Discussing the struggle through which the small college has risen, he said:[2]

> While, therefore, 25 per cent of the small colleges now conducted will survive and be all the stronger for the struggle through which they have passed, another 25 per cent will yield to the inevitable, and one by one take a place in the system of educational work which, though in a sense lower, is in a true sense higher. Another group (50 per cent) of these smaller institutions will come to be known as "junior colleges." There are at least 200 colleges in the United States in which this change would be desirable.

Again President Harper did not stop with theory. With all his energy and enthusiasm, and with ample funds at his disposal, he set about to induce several such struggling colleges to affiliate with the University of Chicago, and limit their course to two years beyond their regular academy work. The arrangement was then made whereby the student upon graduating from such an institution was permitted to enter the junior year of the university without examination. Although this plan (with few exceptions) did not meet with favor at the time, it is interesting to note that it is substantially the arrangement that is being made by several of the State universities at present (notably Missouri) and is being eagerly accepted by smaller institutions. In fact it may be more truthfully said that the smaller institutions themselves are now often taking the lead in bringing about this adjustment.

In 1892, independent of the work of the University of Chicago, but influenced by what Dr. Lange calls a "beneficently potent bacillus" coming from the University of Michigan, a committee of the University of California reorganized the cultural courses of that institution with the following features:[1]

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[1] Harper, W. R. The Trend in Higher Education, p. 349.

[2] Ibid., p. 378.

1. The retention of the traditional framework of the four-year college course leading to a bachelor's degree.

2. The recognition of the middle of this course as a suitable point for turning from cultural to professional aims, since the work of the first two years was in reality a continuation of the secondary educational and the work of the last two years could be connected without a break over into the strictly professional.

Another committee reported in 1903 a further development of the plan of 1892. It provided—

1. For greater freedom in dovetailing the upper end of the four-year course with the lower end of professional courses.

2. For a more definite, sharply marked separation of the last two years, upper division, from the first two years, lower division.

3. For a junior certificate to be given on the completion of six years of combined high school and college work to serve as an admission card to the upper division.

> This arrangement was made deliberately with a view to promoting a unified six-year course, to unstiffening the barrier between the twelfth and thirteenth grades, and to facilitating transfer from one group to another according to students change of purpose.[2]

In 1907 another committee worked out a junior certificate for technical courses as well as cultural, further emphasizing the unity of the six years of secondary education. The same year the State legislature passed an act enabling high-school districts to add two years to the traditional four-year course. In 1910 Fresno became the first high school to avail itself of this opportunity. By 1914 there were 10 and at the present time there are more than 20 of such extensions. We shall review later in greater detail some of the factors influencing this development, but it may be said here that in the minds of its promoters in California at least, the junior college is here to stay.

There is ample evidence that there appeared in the minds of many educators at an early date the suggestion of the junior college as a means to the solution of the problems of the articulation of the high school with the college and university. In 1896 President Jesse, of the University of Missouri, in an address before the North Central Association of Colleges and Secondary Schools, said:[3]

> The first two years in college are really secondary in character. I always think of the high school and academy as covering the lower secondary period, and the fresh-

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[1] Lange, A. F. The Unification of Our School System. Sierra Educational News, vol. 5, June 9-14, p. 99.

[2] Ibid, June, 1909.

[3] Jesse, R. R. Proc. N. Cen. Assoc. of Colleges.

> man and sophomore years at college as covering the upper secondary period. In the secondary period and in at least the first two years at college not only are the studies almost identical, but the character of teaching is the same.

At this same meeting President Draper, of the University of Illinois, said, in discussing President Jesse's address:[1]

> We can not tell just where the high-school course is to end and the college course commence. We all believe that they are continuous and ought to be uninterrupted. The different circumstances of different communities will have much to do with fixing the point where the high-school course shall stop and the college course begin. That point will be advanced higher and still higher as communities grow in size and increase in knowledge, in culture, in means, and in all the instrumentalities for educational development and progress.

Such are the beginnings of the junior college idea. In later chapters we shall consider the different types of the institutions as they present themselves at present. In each case there will be a further more critical discussion of the potent influences operating to give rise to that peculiar type of institution. Following this there will be a detailed consideration of the present status of these institutions; their location, character, quality of instruction, and methods of accrediting.

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[1] Draper. Proc. N. Cen. Assoc. of Colleges and Sec. Schs., 1896, p. 789.

Chapter III.

INFLUENCES TENDING TO FURTHER THE DEVELOPMENT OF THE JUNIOR COLLEGE IDEA.

In the preceding chapter there was presented a brief discussion of the origin and early development of the junior college idea. It remains now to consider at some length those influences which have tended to further the development of this idea. For the purposes of this discussion, these influences have been grouped under the following general heads:

1. Those coming from within the university.
2. Those coming from within the normal school.
3. The demand for an extended high school.
4. The problem of the small college.

It is of interest to note that these four lines of influences which have resulted in the development of the junior college may serve also to explain the four rather distinct types of junior college with which we are familiar to-day. These are:

1. the "lower division" of junior college within the university.
2. The normal school accredited for two years of college work.
3. The public junior college.
4. The private junior college.

It is not the purpose here to discuss these various types. The chief concern in this chapter is to make clear by means of a somewhat detailed analysis those factors and influences which have contributed directly to the development of the junior college idea as a whole as well as to the peculiar types of junior college above mentioned.

1. INFLUENCES COMING FROM WITHIN THE UNIVERSITY.

The university must be held responsible for the first suggestion of the junior college idea in the United States. More particularly must this responsibility and perhaps honor go to the University of Michigan, where the idea was perhaps for the first time officially recognized. From the university also comes the first practical demonstration in an administrative way of the possibilities of the new plan. Credit for this is probably to be divided equally between the Universities of Chicago and of California. But this is not all. In nearly every State where the junior college movement has made any significant progress, it has followed in the wake of university influence. Witness the situation in California, Illinois, Missouri, Minnesota, and Texas as evidence of this assertion.

These facts are significant, and one is led immediately to ask the question Why are these things so? In the attempt to answer this question the leaders in this movement are left, so far as possible, to speak for themselves. For convenience in discussion the answer will be given under the following headings:

1. The rapid growth of the university within recent years.
2. The conviction of the need of a wiser division of university and secondary work.
3. Other administrative advantages.

1. THE RAPID GROWTH OF THE UNIVERSITY WITHIN RECENT YEARS.

The population of the United States increased 4½ times between 1830 and 1890. During the same period the number of colleges and university students increased 10 times.[1]

Gray, writing in 1915, says:[2]

> During the last 20 years Columbia has grown 11 times as great in student enrollment, Illinois 9 times, Michigan and Wisconsin 4 times, California 6 times, Ohio 5 times, and Missouri 8 times. * * * In 10 American institutions, of which 7 are State, the enrollment has gone beyond the 5,000 mark, California leading all State institutions with an enrollment in 1914 of 8,699. Twelve of the largest institutions in the United States have doubled their enrollment in the last decade and are still rapidly increasing.

During the decade from 1903 to 1913 the total enrollment in 30 of our leading universities increased from 67,000 to 113,000, or 68 per cent, as compared with an increase in population of but 21 per cent during the same period.[3]

This rapid increase in enrollment has involved the university in many administrative difficulties, not least of which is the task of providing for the needs of the large groups of students enrolled in the first and second year classes. Gray, who has recently made an investigation of this phase of the problem, says:[4]

> In a president's report of a great State institution for 1913 attention is called to the size of many of the classes. The freshman class for 1913 numbered 1,477, and during the first semester there were 27 freshman and sophomore classes having each more than 150 students and 9 classes having over 350 students each. The number of freshmen in history was 637; elementary economics, 480; in women's hygiene, 571; in men's hygiene, 888; and in chemistry, 687. In the two latter classes a division was made requiring a repetition of the lecture of the instructor, "as if such a repetition were a thing to be deplored." Imagine a freshman class of 444, a pitiable sight, one to make the very gods weep. In the report it was stated that "it would be shortsighted to plan a laboratory with a capacity less than a thousand."

This situation has led many university authorities to support the junior college, which they claim would not only relieve the university from the tremendous expense of caring for these large beginning classes, but would also insure better work and more personal attention for these students when such is especially desirable.

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[1] Avery, Sam. Nat. Ed. Assoc., 1912, p. 784.

[2] Gray, A. A. The Junior College, pp. 96-97.

[3] Independent, Feb., 1914, p. 221.

[4] Gray: The Junior College, p. 96.

2. THE CONVICTION OF THE NEED OF A WISER DIVISION OF UNIVERSITY AND SECONDARY SCHOOL WORK.

University authorities have supported the junior college because of a firm conviction that there is need of a better and wiser division of work between the secondary school and the university. The extension of the high-school course, they claim, will but serve to give to that institution what rightfully belongs to it, and at the same time will relieve the university of a large amount of secondary school work, all of which will lead to a more efficient and economical scheme of public education. Consider the following statements of the leading advocates of the junior college:

President Harper said nearly 20 years ago:[1]

> The work of the freshman and sophomore years is only a continuation of the academy or high-school work. It is a continuation not only in subject matter but in methods employed. It is not until the end of the sophomore year that the university methods of instruction may be employed to advantage. At present this consecutive period of preparation, covering six years, is broken at the end of the fourth year, and the student finds himself adrift. A great waste of time, energy, and interest follows this unnatural break in the prosecution of the student's work.

President Judson, of the same university, said in his report of 1911-12:[2]

> Attention is invited to the situation in the curricula of the colleges. An investigation of this subject shows plainly that from 20 to 30 per cent of the work required in the four-year college is in content and essentially in mode of treatment merely high-school work. In other words, we require the student in order to enter one of the colleges to have spent four years in a good high school, and then, not satisfied with that, we require him before taking serious college work to spend at least a year more in high-school training.
>
> Obviously this leads to the question as to what is the distinction, if any, between work properly adapted to the high school and work better adapted to the college. Is not almost every subject taught in colleges also made a part of the high-school curriculum?

President David Starr Jordan, in 1912, thus expressed his views:[3]

> I am looking forward, as you know, to the time when the large high schools of the State, in conjunction with the small colleges, will relieve the two great universities from the expense and from the necessity of giving instruction of the first two university years. The instruction of these two years is of necessity elementary and of the same general nature as the work of the high school itself. It is not desirable for a university to have more than about 2,000 students gathered together in one place, and when the number comes to exceed that figure, then some division is desirable. The only reasonable division is that which will take away students who do not need libraries or laboratories for their work.

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[1] Harper, W. R. The Trend in Higher Education, p. 378.
[2] In Johnston's Modern High School, p. 837.
[3] Ibid, p. 832.

Dean Lange, of the University of California, perhaps the leading authority on the junior college at present, thus sums up the reasons why that institution has been led to support the junior college:[1]

> Since 1892 the university has been gradually reshaping itself around two organizing ideas. One was that for theoretical and practical considerations alike, the university proper should begin in the middle of the inherited four-year college scheme; the second was and is that the work of the first two years is as a matter of history and fact all a piece of secondary education. This trend of thought and preaching and practice has resulted gradatim in the junior certificate to mark the distinction between university and secondary education, in the policy of placing all professional schools on the basis of not less than two years of nonprofessional training, in making the studies of the last two years of the high school and the first two years of the college largely interchangeable, and, last but not least, in publicly exhibiting the requirements for the junior certificate in terms of unified six-year curricula.

Many other authorities might be cited, but certainly enough has been given to show beyond a doubt that the leading university men of our time have supported the junior college because they have seen in it the opportunity for a reajustment of our present system of education along more practical and efficient lines.

3. OTHER ADMINISTRATIVE ADVANTAGES.

One of the most significant discussions of the administrative advantages of the junior college from the standpoint of the university comes from Columbia University. Surprising as it may seem, this new idea has even penetrated the conservative East.

In his annual report for 1916–17, President Butler strongly recommends the organization of a junior college as a part of the general administrative plan of Columbia University. His reasons are so significant that it will be worth while to review them briefly.

It is pointed out that, with the rapid increase in the enrollment of Columbia College, it has become increasingly difficult for the officers to keep in personal touch with the individual students. Moreover, it is found that there are enrolled two quite distinct classes of students. In the first place there are some that intend to spend three or four years in pursuit of what is called the "liberal and elegant" studies. On the other hand are those, rapidly increasing in number, who enter Columbia College with the definite purpose in mind of meeting the entrance requirements to professional schools as soon as possible. As a result of this division of interest and enrollment, President Butler suggests that the time has come when there might be established in the university a junior college, separate from Columbia College, designed especially for the care and direction of those students who are definitely preparing themselves for professional studies from the time of college entrance, and wish to enter upon those studies with the least possible delay.

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[1] Lange, A. E. Bul. of Univ. of Calif., July, 1915.

It is further emphasized that under present conditions the interests of either one group of the other are necessarily sacrificed. Furthermore, the attempt to meet the many-sided needs of a university forces a division of attention which threatens the traditional policy and purpose of the institution. In conclusion President Butler says:[1]

> The suggestion for the establishment of a junior college is offered as an easy and practical way of meeting the very real difficulties that have arisen in Columbia College owing to its size and diversity of interest and aim among its students, as well as a means of sharpening and defining the place of the historic Columbia College in the Columbia University of to-day and to-morrow.

2. INFLUENCES COMING FROM WITHIN THE NORMAL SCHOOL.

During the past two decades there has been a marked tendency on the part of normal schools to become colleges, or at least to undertake a large amount of college work. Gray cites the following institutions as examples of those making this change:[2] Michigan State Normal College (1897), Montana State Normal College (1903), Chicago Normal School (1903), Michigan State Teachers' College (1903), Colorado State Teachers' College (1909), Iowa State Teachers' College (1909), Illinois State Normal University (1907), Albany Normal College.

This tendency is not limited to any particular territory or to any size of institution. Gray found examples of the change in 13 States, scattered from Montana to New York. Information collected during the course of this investigation shows that in at least 8 States normal schools have been accredited for college work, and that in a number of cases the amount of college work offered was limited to two years.

It is not within the purpose of this investigation to discuss the merits of this change. Recent educational literature is replete with articles dealing with the pros and cons of this question. Interest here centers in the cause of this development, and more especially in its effect upon the junior college movement.

Perhaps the most significant reason for this tendency of normal schools to become colleges has been the ambition on the part of the officials of these institutions to keep pace with the times by providing for the professional training of teachers for all grades of public-school work. As this would include the preparation of high-school as well as elementary-school teachers, the need of offering college courses was apparent. The following are typical of the many arguments made in support of this view. David Felmley says:[3]

> The expansion of the normal school has been occasioned by its legal duty to develop its courses to meet the needs of the public school system. High-school teachers should be trained in the same environment as elementary teachers. They need the

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[1] Butler, N. M. An. Rep., 1916-17.

[2] Gray, A. A. The Junior College, p. 58.

[3] Felmley, David. Ed. Rev., 25, pp. 409-415.

same love of children, the same knowledge of the problems of childhood. To train them in a separate school with different standards and ideals would result in a serious break in spirit, methods, and character of work, as the child passes to the high school. Accordingly, many normal schools in the Middle West are providing programmes four years in length for high-school teachers.

J. W. Crabtree, in discussing this problem before the 1917 meeting of the National Education Association, said:[1]

> The normal school was established for the purpose of training men and women for efficient teaching in the public schools. Its purpose was not to train only a portion of the teachers, leaving the training of the other teachers to other agencies, but its purpose was to train the teachers for all teaching positions in all the public schools. I see no reason why this purpose should be changed.

At this same meeting J. G. Crabbe outlined what he called a "Declaration of Principles for Normal Schools." He said in part:[2]

> The twentieth century normal school is dedicated to higher education, with the special function of supplying teachers for rural schools, the elementary schools, and the high schools. It will extend its course of instruction and practice, as conditions may demand, to four-year courses, thus giving as high a standing in the way of discipline and scholarship as the college now possesses.

Acting on this ambition, a number of normal schools have become colleges or universities in name at least. Others, perhaps a little less ambitious, have been content to offer varying amounts of college work as a part of their regular teacher-training courses, though still claiming to be normal schools. In either case the result was inevitable. Students taking this advanced work were sure, sooner or later, to ask to receive credit for such work in larger colleges and universities. On the other hand, the latter institutions were just as sure to establish some standards to serve as a basis for such accrediting. This is what has actually happened in a number of the States.

But one step more was necessary to make the school a junior college. The practice among State universities has been to credit certain normal schools of their respective States for the amount of college work offered under certain conditions. For various reasons, the most important of which will be emphasized from time to time throughout this discussion, the tendency has been to limit the college work offered to two years above the standard high-school course. When such a plan is standardized, these institutions become essentially junior colleges.

This blending of the junior-college movement with that of the upward extension of the normal school is perhaps best illustrated by the situation in Wisconsin. The people of this State demanded better opportunities for securing the early part of a college education, near home and at less expense. In response to this demand, as well as to that of ambitious normal-school officials, the State legislature passed in 1911 the following act making it possible for normal schools to give two years of college work:

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[1] Crabtree, J. W. Proc. Nat. Ed. Assoc., 1917, pp. 403–404.

[2] Crabbe, J. G. Proc. Nat. Ed. Assoc., pp. 385–388.

> The board of normal-school regents may extend the course of instruction in any normal school so that any course the admission to which is based upon graduation from an accredited high school or its equivalent may include the substantial equivalent given in the first two years of the college course. Such course of instruction shall not be extended further than the substantial equivalent of the instruction given in the first two years of such college course without consent of the legislature.[1]

In addition to Wisconsin, the following States have recognized the college work given in normal schools upon essentially the same basis as that given in public and private junior colleges: Arizona, Indiana, Michigan, Minnesota, Nebraska, North Dakota, Oklahoma, Utah, and West Virginia. The State board of examiners of Iowa has put normal schools and junior colleges in the same class by granting the third-grade State certificate to graduates of both institutions who have taken certain courses in education.

3. THE DEMAND FOR AN EXTENDED HIGH SCHOOL.

The junior college in its present form involves a fundamental change in our traditional institution of secondary education—the high school. We have already considered at some length those factors which have been operative within the university and normal school in the encouragement of the junior-college idea. However important these influences may have been, it is undoubtedly true that the most significant aspect of this movement is to be found in the fact that it seems to be an additional step in the evolution of our system of public education. The junior college to-day is the result of the demand of an intelligent public that the opportunities for receiving a higher education be brought within the reach of all, just as the high school has been and is the result of such demands. There is every reason to believe that its roots lie deeply embedded in those forces which have made American public education what it is to-day. Prof. James R. Angell, in discussing this problem before the North Central Association of Colleges and Secondary Schools in 1915, said:[2]

> It would in my judgment be a great mistake to view the movement as purely an administrative arrangement of our college work. The meaning of the matter seems to me to lie deeper than that. If I mistake not, it is a symptom simply, but one fraught with immense potential consequences, of a renascence in communal interest in higher education, of which the first great wave gave us our State universities and our agricultural and engineering schools.

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[1] The 1915 edition of the School Code of Wisconsin, p. 244.

[2] Angell. The Junior College Movement in High Schools. Sch. Rev., vol. 23, pp 289-302, May, 1915.

Dean A. F. Lange, of the University of California, one of the foremost authorities on the junior college and leader of the movement in his State, says:[1]

> The rise and progress of the junior college must be regarded as an integral phase of the country-wide movement toward a more adequate State system of education, a system that shall function progressively so as to secure for the Nation the greatest efficiency of the greatest numbers.

The immediate problem here is to review briefly those forces which have been operative in effecting this significant change in the scheme of public education. It is hoped that thereby light will be shed upon the problems of organization and administration of the junior college as an integral part of the public-school system.

1. Historically there is little justification for believing that the traditional high-school course of four years is the best possible arrangement for secondary education. In so far as the limits of this period have been established, they have been of accidental rather than purposeful origin. In fact, any historical inquiry covering the theoretical field of secondary education would find itself overlapping at one time the higher grades of the elementary school and at another time the lower classes of the college. Brown says:[2]

> Historically the limits of secondary education are shadowy and variable. * * * In the course of its development the American secondary school has got wedged in between the elementary school and the college, each of which has developed independently without any such check or bar. So the education that we commonly call secondary covers a shorter period in this country than in the leading culture lands.

Another writer of no less prominence says:[3]

> Secondary education has never been adequately and acceptably defined. In our own country the views concerning secondary education as to its purpose, scope, curriculum, method, or organization are of the most diverse character, even among those who are specialists in this very field.

Inglis says:[4]

> The curriculum of the public high school has always transcended the requirements of subject matter set up by the colleges for admission and frequently has included subjects regularly included in the college curriculum. Likewise the college curriculum regularly includes subjects of study which are essentially of secondary grade. There has always been a certain amount of overlapping in the curricula of the secondary school and college. In the average high school it would not be at all difficult to map out a one or two year "postgraduate" course which would be quite comparable to possible freshman and sophomore courses in college.

It seems clear from these statements that, whenever social needs are such as to demand a change in the traditional conception of secondary education, that which is more or less an accidental product of history should not stand in the way.

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[1] Lange, A. F. In bulletin on Junior College published by Univ. Calif., July, 1915.

[2] Brown, E. E. The Making of Our Middle Schools, p. 2.

[3] Monroe: Principles of Secondary Education, p. 2.

[4] Inglis: Principles of Secondary Education, p. 310.

2. Some have no doubt been influenced by the organization of secondary education that is found in the leading countries of Europe. In France, England, and Germany examples are found of the successful operation of closely connected and logically outlined courses covering from seven to nine years of what may be called secondary education. In these countries secondary education commences much earlier than in the United States and ends much later. Advocates of the junior high school in this country are emphasizing the earlier beginning of the period, while those who champion the junior college see in it the recognition of the value of continuing secondary education two more years. Everyone is familiar with the general organization of secondary education in Europe, and it need not be discussed in detail here. It may be said, however, that it contains many features that should commend themselves to the student of American education, and we may safely conclude that it is, at least, a significant suggestion of the possibilities of the junior college plan.

3. A more particular argument that is being advanced in favor of the extension of the high-school course by the organization of a junior college is that it provides opportunities for college work at home at less expense and under close supervision.

Whether justifiable or not, there is a widespread and sincere demand upon the part of parents and students alike that the opportunities for securing a higher education be brought within reach of all. Parents favor a home college because they feel that their boys and girls are still too immature to be safe in the freedom-loving atmosphere of a large institution. To many also the latter alternative is made impossible for financial reasons. A recent bulletin of the public schools of Santa Barbara, Calif., names four classes of students that patronize a local junior college: First, those who can not afford to live away from home; second, those who are too young and immature to cope with the problems of the large university; third, those who are slightly deficient in entrance requirements and need a little personal encouragement and guidance; fourth, those who do not intend to complete college work but desire certain additional studies.

There is every reason to believe that this demand, that higher education be brought within reach of all, is widespread. More than 90 per cent of the replies to the questionnaire mentioned this as one of the reasons for the establishment of a junior college, and 50 per cent mentioned it as the most important reason. If the replies of the 21 public junior colleges are considered separately, it will be found that this demand on the part of parents and students ranks first both in frequency of mention and in relative importance. (See Table 1, p. 28.)

The principal of the Kansas City Polytechnic Institute writes:

> The dominant reason for the establishment of a junior college as a part of a system of public schools lies in the fact that the average graduate of the high school has not reached the maturity desirable for leaving home and entering the complex life of the larger university.

In this city the public actually forced the organization of the junior college by insisting that their children remain in high school for at least a fifth year. The standardization of this additional work naturally followed, and the result of this is the junior college. Almost identical examples of the same influences might be cited from a number of cities in Michigan, Minnesota, Illinois, and especially in California.

4. Closely allied to the foregoing reason, but of sufficient significance to deserve separate mention, is the demand for a junior college as a completion school for those who can not go further.

Says Prof. Lange:[1]

> In California the upward extension of the high school was urged in the educational interest of the great mass of high-school graduates, who can not, will not, should not, become university students. The controlling purpose was to provide a reasonably complete education, whether general or vocational.

It is an established fact that a large percentage of high-school graduates do not enter higher institutions. There is also evidence to show that many of these fail to do so largely because such institutions are not within their reach. The significance of this demand for the junior college as a completion school is shown by the fact that it ranks first over all both in frequency of mention and in importance in the replies of 77 institutions to the questionnaire. (See Appendix J.) Further evidence pointing in this same direction will be found in a later chapter, where the number of graduates from the junior colleges is compared with the number that enter higher institutions.

5. In many instances the junior college has appeared as a response to special local needs. Thirty-five institutions gave this as one of the reasons for their establishment. Fifty per cent of the public junior colleges replying included it in their answer. Principal William J. Bogan, of the Lane Technical School, of Chicago, writes:

> It was believed by many citizens of Chicago that junior colleges should be encouraged in the city for the purpose of developing home talent that might be utilized in solving some of our city problems. They believed that every great industrial center like Chicago ought to work out many of its problems through its own trained citizens. It was believed that this great industrial city would serve as an industrial laboratory in which students might gain a knowledge of the industries by direct contact. After graduation our city boys, familiar with city conditions, trained in our city colleges, would be better than outsiders to solve our problems.

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[1] Lange, A. F. In Univ. of Calif. Bul., July, 1915, p. 8.

President James, of the University of Illinois, one of the ardent advocates of the junior college, calls attention to the fact that the high schools thus extended could—

> relieve State universities of much of the elementary extension service they are forced to render communities, such as water analysis, advice in sanitary and other forms of engineering, agriculture, and public health.[1]

6. As already suggested, one phase of the local needs is the demand for certain vocational training that can not be furnished by the high schools. In a bulletin devoted entirely to the problem of the junior college, published by the University of California, we read:[2]

> There is an increasingly imperative need of vocational training, first of all for those whose education for general social efficiency is not prolonged beyond the elementary school, and secondly for those whose general education ends with the four-year high-school period and who are not headed for one of the professions, in the restricted sense. For this latter class the junior college has much to offer.

More than 30 per cent of the junior colleges suggest vocational training of this sort as one of their aims, and a number of them, notably those in Chicago, Kansas City, Detroit, Los Angeles, and Sacramento, are now offering specific vocational courses, such as journalism.

7. Another factor that has tended to emphasize belief that the end of the sophomore year of college, rather than graduation from high school, marks the real end of secondary education, has been the increase in the entrance requirements of professional schools. According to MacLean,[3] there were in 1904 only 3 medical schools in the United States that required more than high-school work for admission, while in 1913 there were 41. At present the American Medical Association specifies two years of college work as a minimum requirement for admission to all standard medical colleges.

Similar changes have been made by other professional institutions. As a consequence there is an increasing demand for some provision whereby the pre-professional training can be secured at home at a minimum expense. There is scarcely to be found a discussion of the junior college problem that does not mention this point. Fifteen of the institutions considered in this investigation mentioned this as an especially important reason for their establishment.

8. The establishment of a local college has been encouraged in some sections of the country by the geographical remoteness of the standard colleges and universities.

A. A. Gray says:[4]

> One of the chief causes for the rapid growth of this new educational movement in California is the large size of the State and the great distance of the high schools from

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[1] James, E. J. Quoted in Johnson's Modern High School, p. 834.

[2] Univ. Calif. Bul., July, 1915, p. 8.

[3] MacLean, G. L. Bu. of Educ. Bul. No. 4, 1913.

[4] Gray, A. A. The Junior College. Univ. Calif., master's thesis. Univ. Iowa library (unpublished).

the two large universities of the State. The fact that the majority of the junior colleges of the State are located in the southern part, from 300 to 500 miles away from the State university, shows the influence of distance in the establishment of these colleges.

The State of Idaho furnishes another example of the same condition. In that State there are a number of high schools located hundreds of miles away from the university. To offset this condition, the State legislature passed an act providing for a junior college at Pocatello. This institution was thereby put under State control, and the scope of its work limited to two years of standard college work. Similar conditions exist in Colorado and Texas. In the latter State a large number of junior colleges have recently been organized. More than 40 per cent of the public junior colleges replying to the questionnaire give this question of remoteness as one of the reasons for their organization.

9. Some have supported the junior colleges as a financial saving to the community. The principal of Grand Rapids (Mich.) High School estimates that it costs the parents of that city $250,000 annually to send their children away from home to complete their education. Much of this he believes has been saved to the community by the establishment of a junior college. Gray estimates that the city of Los Angeles saves $100,000 annually by keeping the 200 students enrolled in the junior college at home rather than sending them away to the university.

Evidence so far seems to show that a junior college can be supported at a cost per pupil very little in excess of the per capita cost of high-school pupils. Estimates furnished by several cities of California show a range of from $80 to $200 per capita cost to the city for each student in the junior college. Many call attention to the fact that this could be much reduced by larger enrollments.

This discussion of the reasons that have been given for the upper extension of the high school and the formation of junior colleges is evidently far from comprehensive. An attempt has been made to enumerate only some of the more important points, and the reader is left largely to determine the value of such for himself. For further material on the status of the junior college in connection with the high schools of the various States, attention is called to the succeeding chapter of this report, and also to the bibliography on page 136. It is hoped that enough has been said to indicate roughly those forces which have been operative in the establishment of the public junior college.

TABLE 1.—*Reasons for organizing junior colleges.*[1]

Reasons.	Number.	Per cent.	Rank in frequency.[2]	Rank in importance.[2]
Geographical	9	42	5½	3
Financial	5	24	7½	4½
Desire of parents	20	95	1	1½
Desire of students	14	66	3	1½
Segregation of sexes	1	4.8	10½	11
Religious	1	4.8	10½	10
Vocational	5	24	7½	8
Teacher training	2	9.5	9	8
Professional	9	42	5½	8
Completion school	17	81	2	6
Local needs	10	48	4	4½

[1] A summary of the replies of 21 public junior colleges to question 13 on a questionnaire (see Appendix A).

[2] In the third column is given the rank in frequency of mention, while in the fourth column is given the rank in frequency of which each reason was underscored as especially important. The former is the more reliable measure, because it represents a larger number of replies.

REASONS FOR THE ORGANIZATION OF PUBLIC JUNIOR COLLEGES, RANKED IN ORDER OF IMPORTANCE AS DETERMINED BY THE FREQUENCY OF MENTION.

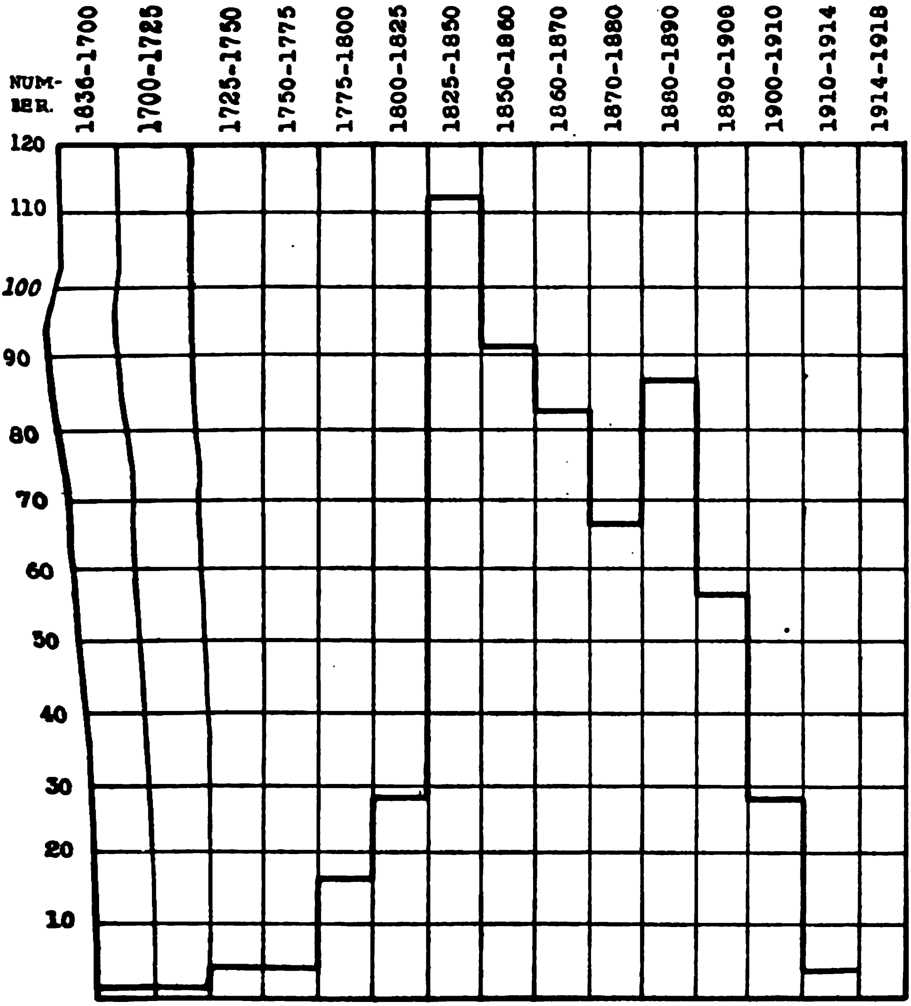
1. Desire of parents to keep children at home.
2. To provide a completion school for those who can not go further.
3. Desire of students to secure college work near home.
4. To meet specific local needs.
5. Geographical remoteness from a standard college or university.
6. To meet the entrance requirements of professional schools.
7. To provide vocational training more advanced than high-school work.
8. Financial difficulty in maintaining a four-year course.
9. To provide additional opportunities for teacher training.
10. To secure the segregation of sexes.
11. To provide opportunities for higher education under church control.

4. THE PROBLEM OF THE SMALL COLLEGE.

Probably what has been and will continue to be one of the most potent factors in the development of the junior college is the situation confronting the traditional small college to-day. So significant is this situation as it relates to the future development of higher education that it is believed profitable to glance briefly at the history of this American institution. The future of the college is made clear only by an understanding of its past, and a vision of both is essential if it is desired to see the junior college in its true light.

Throughout the history of higher education in the United States, the small college has been the typical institution. In 1850 there was not a college that enrolled more than 400 students. Even as late as 1902, according to the Commissioner of Education, 64.4 per cent of the 596 colleges and universities had less than 400 students, and 312, or 52 per cent, had less than 300 students enrolled.

As an institution the American college is unique. Though perhaps similar at the time of its origin to certain European institutions, it has been so changed by the genius and originality of the American people that it no longer bears the marks of its ancestors. To-day the hundreds of small colleges scattered from coast to coast stand as monuments to the American, the democratic, spirit in higher education.



GRAPH I.—Number of colleges established during each of several periods of American history.

No better evidence of this statement can be found than the rapid growth in number of these institutions. Graph I illustrates this development clearly. According to this author, there were in the United States, in 1914, 567 colleges and universities. Of that number, 262 antedate the Civil War, while 305 have been established since that time. President Pritchett, of the Carnegie Foundation, in his investigations found nearly 1,000 institutions calling themselves colleges or universities which were doing work all the way from a four-year college course down to a very poor grade of high-school work.

This condition suggests that it is not the large number of these institutions which is so significant, but rather the lack of uniformity of standards. Up until the last few years any group of men could secure from the State a charter granting the right to organize a college of some kind, to grant such degrees as are usually conferred by such schools, and even to state the requirements necessary to obtain a degree. Under these conditions denominational, local, and personal rivalries have led to the establishment, especially in some States, of more colleges than can be properly supported.

The actual results of this laissez-faire policy can, perhaps, be better appreciated if we study at close range the conditions in various sections of the country. As has been said, the American people have liked the small college and have made every effort to have plenty of them. The example was first set by Ohio. According to Thompson,[1] it is a simple statement of fact that probably 300 institutions, more or less permanent in character, have organized for educational purposes in Ohio.

With the development of the West, the same spirit continued to express itself. To quote Gray:[2]

> In recent years in the Far West, where the population is on the increase, usually one of the first "drawing cards" sought by a community is "a college." A typical example of this is found in southern Idaho, where the funds are now being gathered to start a denominational college in a community only six years old. Idaho already has a State university, a technical college, two denominational colleges, and two State normal schools; yet the entire population of the State is less than that of the city of San Francisco. Within a radius of about 100 miles of this proposed college there can not be found more than a score of small high schools, which graduated last year not more than 300 students qualified for college admission. Where this college expects to find its students it is difficult to see, when not one-fifth of the 300 will go to college at all.

In Oregon and California similar conditions are known to exist. Commissioner Claxton, in his report for 1912, thus describes the condition in the former State:[3]

> Admirably as the history of Ohio and Kansas illustrates this sort of development, the Willamette Valley in Oregon will serve still better. There, in an area 120 miles long and 50 miles wide, in a State having a total population of 675,000, are found 12 colleges, including the State university, the agriculture and mechanical college, and

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[1] Thompson, W. O. Ohio Centennial Celebration, 1903, p. 489.

[2] Gray, A. A. Univ. Calif. Thesis, 1915, p. 38.

[3] Rep. Commis. of Educ., 1912, p. 105.

> one clearly undenominational college; the rest represent nine denominations, while a tenth denomination has organized a junior college in another part of the State. One of these colleges, which belongs to a great church, was first opened nearly 50 years ago, yet last year its total registration of college students was only about 20. * * * In one of the "colleges" of this region, nearly half a century old, all the work in classroom, laboratory and museum, in physics, chemistry, biology and geology is carried on by one man in a single room of not more than 16 feet square.

A. A. Gray, of the University of California, in a recent report describes similar conditions existing in his own State, in a small area immediately surrounding Los Angeles.

Turning to the South, we find conditions even worse. According to Miss Colton, an authority on higher education in the Southern States:[1]

> There are in the South 380 institutions claiming to be colleges or universities, only 30 of which are recognized by the Association of Colleges and Secondary Schools. Thirty-five or forty others approximate the minimum requirements of a standard college; of the remaining 310, there are perhaps 50 or 60 that might improve their equipment, curriculum, and organization sufficiently to do two years of college work. In North Carolina, for instance, which is fairly typical of all Southern States in its superabundance of nominal colleges, there are 29 denominational colleges, distributed as follows: Episcopal, Moravian, Friends, 1 each; Christian and Reformed, 2 each; Lutheran and Roman Catholic, 3 each; Baptist and Presbyterian, 5 each; Methodist, 6; and yet only 1 of the whole 29 conforms to the minimum requirements of the Southern College Association.

Naturally, such a state of affairs led to a period of definition and standardization. The United States Bureau of Education, the Carnegie Foundation, the legislatures of the various States, the different churches and numerous educational associations, have all had a hand in this work. So thoroughly has this work been conducted that the Bureau of Education in a recent bulletin has deemed it necessary to classify all of these attempts in a form immediately serviceable to educational officers in general.[2]

A complete discussion of these standards would not be in place here. It may safely be said, however, that they approximate uniformity on many points. To be considered a standard college an institution should have a productive endowment of at least $200,000. It should require for admission the completion of a standard four-year high-school course. It should have a faculty of college graduates with at least a year or more of graduate work. It should have ample material equipment in every way; buildings, libraries, and laboratories sufficient to assure high-grade work in a variety of scientific and cultural subjects, and it should specify and enforce certain minimum requirements for graduation.

Without further detail it will be evident to the reader that the application of these tests would result in the exclusion of a large number of institutions. A few years ago the writer made an investigation of more than 200 small colleges representing nearly every State in the Union. According to data collected at that time, and as is shown by the Report of the Commissioner of Education for 1912, more than 50 per cent of these institutions failed to reach the minimum requirements for endowment of $200,000, although this standard has been the one quite generally agreed upon. Of the total of 581 colleges listed in the commissioner's report for that year, 197 had less than this minimum requirement. Similar results were found when other parts of the standards were applied.

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[1] Colton: The Junior College Problem in the South, Merideth College Bul., 1915.

[2] Bul. of Bu. of Educ., No. 17, 1917.

There is but one conclusion to this discussion thus far. The much-prized institution of American democracy, the small college, is facing a serious crisis. The constantly increasing tendency to enforce the standards already referred to threatens the very life of these institutions. Must they go?

Serious-minded educators have for almost a score of years been trying to answer this question. They see, on the one hand, the disastrous results of the policy above described, and are firmly convinced that such conditions can not be allowed to continue, yet, on the other hand, they recognize the work of these institutions. They know by what giving of life and blood this work has been made possible, and they know the spirit of the American people. They know that anything but an intelligent, broad-minded attempt to solve this problem would be unjust, and sooner or later bound to fail.

President Harper, of the University of Chicago, faced this problem squarely almost 20 years ago.[1]

So thoroughly did he analyze the situation that the factors which he suggested as determining the future of the small college are for the most part equally valid to-day. In the first place, there are certain factors which seem to favor the development of the small colleges. Among these may be mentioned—

1. The widespread belief that the small college has many advantages over the larger institutions. This belief, whether based upon facts or not, is a very certain element of strength to these institutions.
2. Local pride in the various communities where colleges have been established and the interest and support of the men of wealth.
3. The strong religious support of most of these institutions.
4. The democratic spirit of the American people.
5. The increased standards of professional schools and the more exact definition of the high school and the university seem to leave a definite field of operation for the small college.

On the other hand there are certain factors that seem to stand in the way of the development of the small college. These are:

1. The rapid development of the high school within the last 25 years. Much of what was formerly taught in the college is now

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[1] Harper, W. R. The Trend in Higher Education, pp. 349-390.

offered in the high school, and the latter is usually equipped to give such work in a more effective manner. Add to this the present tendency of the high school to extend its course two additional years, and we must admit that it becomes a menace to the traditional small college.

2. On the other side of the college is the university. This institution is also the product of the last quarter century. In the 10 years from 1904 to 1914 the number of students in 30 universities increased from 67,000 to 113,000, or 68 per cent. The reasons why these powerful, well-equipped, State-supported institutions should draw a large part of the constituency of the small college are so evident that they need not be discussed further.

3. The recent tendency toward specialization makes demands for a broad and varied curriculum, to suit the various desires and capacities of students. These demands the small and poorly equipped institutions can not meet. This has led students to finish their courses in the universities. The result has been the depletion of the upper two classes in the small college until in many cases there are few students who rank above sophomores.

4. Perhaps the greatest difficulty confronting the small college is lack of funds to keep its work up to present standards. Evidence of this has already been presented. With few students and a small and uncertain income at least 50 per cent or more of these institutions find it impossible to keep up with even the minimum of present standards. Should such institutions continue to grant degrees?

We come now to the solution. What changes seem desirable? What place is the small college to hold in the future? Many suggestions have been offered. We can barely mention these here.

1. In the first place, it is certain that a number of these institutions will survive the struggle of existence and be all the stronger for it. President Harper suggested that 25 per cent of our colleges should be expected to meet the new demands. Recent evidence proves that this was a reasonable estimate. In 1900 there were only 3 colleges in the South that had standard requirements for entrance, while in 1912 this number had risen to 160.[1]

2. A second alternative for the college of limited means is that of limiting its work to that of the standard high-school course and changing its name accordingly. We have already seen that a large per cent of our so-called colleges, especially in the South, clearly belong to this class. President Harper claimed that at least 25 per cent of all the institutions should make this change.

3. A third solution has been found in the amalgamation of two or more institutions of limited means. This has frequently been accom-

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[1] Colton, E. A. The Junior College Problem in the South. Meredith College Bulletin, January, 1915.

plished with success, and there is abundant opportunity for more work along the same line. We need but mention the instance referred to in North Carolina, where one church maintains 6 competing colleges, while only 1 of the entire 29 institutions of that State conforms to the requirements of the Southern College Association.[1]

4. What of the remaining 50 per cent of small colleges which fall between the two above classes? These institutions are not qualified to offer four years of college work and yet can not be asked to attempt to do no college work at all. The private junior colleges of to-day, 66 of which are considered in this report, are the answer to this question. Since the days of President Harper, who so ably championed the cause of the junior college, there has been a growing conviction of the truth of his contentions. The Commissioner of Education wrote in 1912:[2]

> In the years that have elapsed since this great educational statesman uttered these words the movement for the readjustment of the name and organization of institutions to fit more exactly their real purposes and practices, and for the organization of junior colleges or the reorganizasion of old institutions on substantially a junior college basis, has gone on slowly but with a sure step.

If the reader will but glance at Table 3, on page 42, which shows the dates of the organization of junior colleges, he will be convinced that his "slow and sure step" has now become a "double quick."

In all parts of the country there have appeared ardent supporters of this plan. Miss Colton, of Meredith College, already referred to, wrote in 1915:[3]

> The South offers a flourishing field for the junior college. No other section of the country would be more benefited than the South by such a reorganization of its higher institutions of learning.

In another connection she says:

> The standard of all church colleges in the South would be much improved if the weaker denominations would build one standard college in each State, or a group of States, with an affiliated junior college in each State of the group, and if the stronger denominations would limit the number of their colleges in the State to one college for men and women, either separate or combined, and to one or two junior colleges.

A number of the States have taken definite steps toward the accrediting of junior colleges. Among these may be mentioned Virginia, Missouri, Illinois, Minnesota, California, and others. More detailed information in regard to this will be found in a later chapter on "Accrediting of Junior Colleges." As will be seen there, the number of institutions that are consenting to limit their work to two years is surprisingly large.

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[1] Colton, E. A. The Junior College Problem in the South. Meredith College Bulletin, January, 1915.

[2] Rep. Commis. of Educ., 1912.

[3] Colton, A. E. The Junior College Problem in the South. Meredith College Bulletin, 1915.

Why have these schools been willing to become junior colleges in such large numbers? In order to be able to answer this question directly, we included question 13 in the questionnaire to junior colleges (see Appendix A). The replies of 69 institutions have been summarized on pages 36–37. A few of them, however, refer especially to the small college and will be discussed briefly.

1. The junior college offers a way out for those who have so earnestly maintained the value of the religious control of higher education. Its recent rapid development is due in part to the fact that the leaders of denominational colleges are awakening to their opportunities.

President Stout, of Howard Payne College, says:[1]

> The junior college is the solution to one of the church's exceedingly knotty problems in education.

President Leath, of North Texas College, in discussing this same problem said:[2] "The problem before the church is to produce a frictionless system of church schools," and he finds the junior college to be the key to the solution of this problem.

In view of the conditions existing in some of the Southern States, especially, these statements of the educational leaders of a prominent church are significant.

TABLE 2.—*Reasons for organizing junior colleges.*[3]

Reasons.	Number.	Per cent.	Rank in frequency.[4]	Rank in importance.[4]
Geographical	10	18	11	10
Financial	26	46	3	3
Desire of parents	17	30	9	7½
Desire of students	25	44	4	5½
Segregation of sexes	14	25	10	7½
Religious	38	68	1	1
Vocational	20	35	7	10
Teacher training	19	34	8	10
Professional	22	39	5½	4
Completion	36	64	2	2
Local needs	22	39	5½	5½

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[1] Stout, H. E. The Place of the Junior College. Bul. of Bd. of Educ., M. E. Church South, 1917.

[2] Leath, J. O. The Relation of the Junior College and Standard College. (Same Bulletin.)

[3] A summary of the replies of 54 private junior colleges to question 13 of the questionnaire. (See Appendix A.)

[4] In the fourth column is given the rank in frequency of mention, while in the fifth column the rank in frequency of which each reason was underscored as especially important. The former is the more reliable measure, because it represents the larger number of replies.

REASONS FOR THE ORGANIZATION OF PRIVATE JUNIOR COLLEGES, RANKED IN ORDER AS DETERMINED BY THE FREQUENCY OF MENTION.

1. To provide opportunities for higher education under church control.
2. To provide a completion school for those who can not go further.
3. Financial difficulty of maintaining a four-year course.
4. Desire of students for college work near home.
5. To meet the entrance requirements to professional schools.
6. To meet specific local needs.
7. To provide vocational training in advance of high-school work.
8. To provide additional opportunities for teacher training.
9. Desire of parents to keep children near home.
10. Desire to secure segregation of sexes.
11. Geographical remoteness from a standard college or university.

If the private junior college can secure the values to be derived from the religious control of higher education, and at the same time eliminate the evils that have risen as a result of low standards and demoralizing competition which has been so common with denominational institutions, we may safely predict a secure place for it in future educational systems.

2. In the South, where colleges for women seem to flourish, the junior college finds another stronghold. With insufficient funds at their disposal but still convinced of the advantages of the segregation of the sexes during certain years of adolescence, these institutions have found the junior college admirably adapted to their needs. President Wood, of Stephens College, in an address before the National Education Association in 1916, said:[1]

> The cordial reception tendered them [the junior colleges in Missouri] was due to various causes, the chief of which was the growing concern of parents and educators over conditions surrounding girls yet in their teens, in the large coeducational institutions. Here lies the argument for giving the private junior college for women a definite place in an educational system. Through it the period of training of the adolescent girl may be extended two years beyond that provided by the present organization of the secondary schools.

It should be added that the University of Missouri, through the utilization of the junior-college idea, has found a definite and undoubtedly a permanent place for the small colleges for women of that State. Its example is worthy of imitation.

3. In some sections of the country the private junior colleges have been encouraged as a means of providing for additional opportunities for teacher training. This is especially true of Texas, where the so-called "junior-college law" is nothing but a provision entitling

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[1] Wood, James M. The Junior College. Address before Nat. Ed. Assoc., July 6, 1917. Stephens College Bulletin, June, 1916.

graduates of first-class junior colleges, as well as other standard colleges of the State, to receive a first-grade State certificate upon fulfilling certain other requirements. A large number of junior colleges have been established under the provisions of this law, evidently expecting to make teacher training a prominent feature.

Nineteen, or 34 per cent, of the private junior colleges replying to the questionnaire mentioned the desire to provide additional opportunities for teacher training as one of the reasons for their organization. As long as there comes from the various States a constant call for more and better trained teachers, no one can deny that the small college, equipped to do well what it attempts to do, has an excellent opportunity to perform a much-needed service for the schools of the country.

4. Perhaps the most important single factor that has led small colleges to become junior colleges is that of the financial difficulty of maintaining a four-year course under present standards. This feature has already been discussed at length and need only be mentioned here. Seventeen institutions replying to the questionnaire mention this as an especially important reason for making a change.

When President Harper suggested in 1902 that perhaps 50 per cent of the colleges of the country should limit their work by becoming junior colleges, he met with very little response from the colleges themselves. Now the wisdom of his advice is widely recognized. In this connection the following quotations from letters accompanying the replies to the questionnaire will be of interest:

> A big controlling reason, at the time of reorganization, was a desire to make only honest claims. I knew that we could not, with the resources at hand, give a baccalaureate course and hence ceased to claim to do it.
>
> Our chief reason was honesty of standards. We did not want to advertise the school as doing more than two years of college work when we knew that it could not be well done with our limited equipment.
>
> We prefer good standing among colleges as a junior college to poor standing as a senior college.
>
> The junior college, if fostered, will enable the honest small college to do real worth while work and will be the means of closing the "degree-giving mill" so prevalent in our country.

These college presidents have realized the fact that we have endeavored to emphasize throughout this chapter, namely, that the junior college offers a solution to the problem of the small college. By such an organization the small college secures for itself a definite place in the educational system; it becomes an honest institution by claiming to do only that which it can do well, and puts itself in position to meet certain great educational needs such as those which we have mentioned in this and other chapters of this report. By this means there will be assurance that the excellent contributions of the small college to the education of American democracy will be continued, but that at the same time the serious evils that have so frequently been a by-product of these institutions will be checked if not absolutely abolished.

No discussion of the relation of the small college to the junior college would be complete without some mention of the recent educational experiment carried out so systematically by the University of Missouri. In the number of weak and poorly-equipped institutions attempting to do college work, Missouri was perhaps typical of the other States which we have described. One exception might be noted, however, in the fact that in this State most of the colleges were for women.

In 1911 a few of these institutions, feeling that they were misfits in the field of higher education, having no recognition by the State, and assured that "their salvation depended upon getting such recognition," invited the University of Missouri to extend its accrediting system to include the small college. The invitation was readily accepted. In the working out of a plan for such, the university consulted freely with those representing the colleges concerned, and the final arrangement was mutually agreed upon.

For many reasons it was agreed that the work of these institutions should be limited to two years. Certain requirements were set up that all were expected to meet. Any institution desiring to be accredited first applied for a blank which was furnished by the university. On this blank was placed carefully data relative to the actual status of the institution on the points mentioned in the requirements. If the university authorities were convinced by the report that the institution deserved to be considered, a special committee was sent to inspect the same, with power to take final action.

An evidence of the success of the plan is found in the large number of schools that have been accredited. In the 1916–17 catalogue of the University of Missouri we find the names of 14 accredited junior colleges. If we look to the colleges themselves, we find sufficient reason for this enthusiastic response. They report a better faculty, better equipment, higher entrance requirements and requirements for graduation, more students of a higher class, more graduates, and better financial support.

President Wood, of Stephens College, Columbia, Mo., in discussing these results before the National Education Association in 1916, reports an increase of 180 per cent in enrollment in his school from 1912 to 1916. The number of graduates during the same period increased 227 per cent. The percentage of high-school graduates in the literary department increased from 57 per cent to 87 per cent during this time, while an annual deficit of $15,000 was turned into an annual surplus of $4,000.[1]

In regard to the encouraging of financial support after becoming junior colleges, Prof. Coursault reports an excellent example:[2]

> An instance of this appeared when one of the accredited junior colleges needed $75,000 to complete payment on a building. A St. Louis man headed the subscription list with $10,000, and in doing so remarked: "I never contributed to this college before because I was not certain that its work was effective. But now, since the university has vouched for the efficiency of the institution, I am glad to contribute to its needs."

In February of this year the University of Missouri issued a special bulletin of 182 pages devoted strictly to the needs of the junior colleges of that State. It is apparently safe to say that the junior college in Missouri bears every mark of success, and that the example there set merits imitation.

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[1] Wood, James M. The Junior College. Address before Nat. Ed. Assoc., New York, July, 1916, Stephens College.

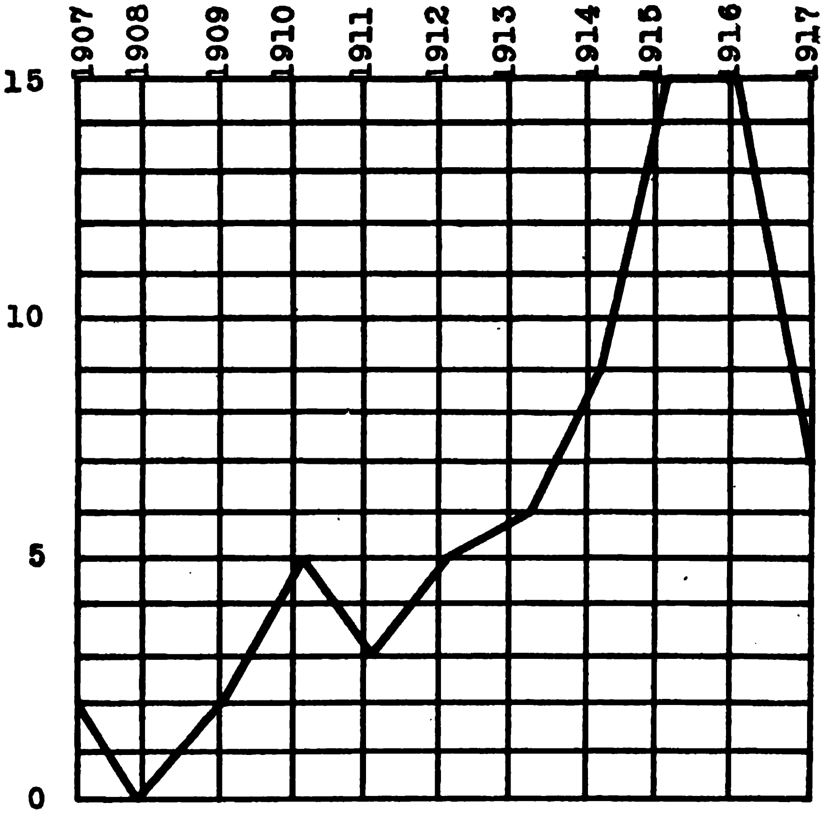
[2] Coursault: Standardizing Junior Colleges. Educ. Rev., vol. 8, pp. 36-62.

Chapter IV.

PRESENT STATUS OF THE JUNIOR COLLEGE.

1. RECENT GROWTH.

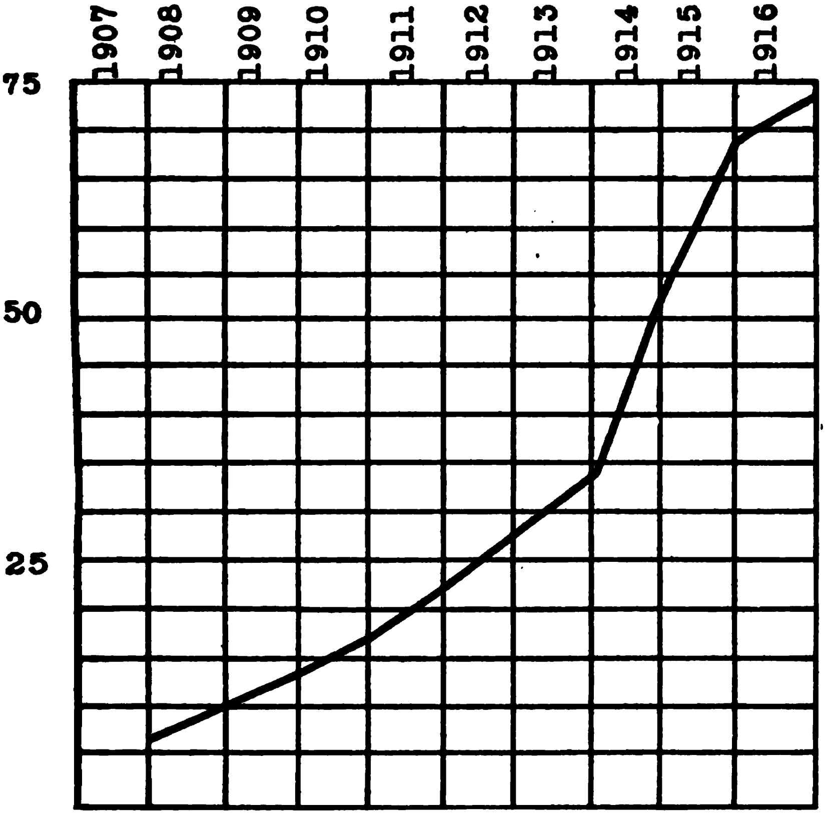
In an earlier chapter were traced the beginnings of the junior college movement. As was there suggested, this new departure in education found its first significant expression at the University of Michigan in the early eighties. Later, in 1892, it was taken up almost simultaneously by the Universities of Chicago and California. It will be remembered that in these institutions there was not only a reorganization of the liberal arts colleges into upper and lower divisions, or junior and senior colleges, but that also definite steps were taken toward the reorganization of the high schools and colleges of the country in accordance with this idea. Both institutions encouraged high schools to extend their courses so as to include at least



GRAPH II.—Number of junior colleges organized each year for the years 1907-1917.

one and ultimately two years of standard college work. The University of Chicago in particular emphasized also the necessity of small colleges limiting their work to the first two years rather than attempting to offer the full four years of college work.

Although especially ably championed by President Harper, of the University of Chicago, and by Dean Lange, of the University of California, and although accepted favorably by many educators, the junior college movement made little headway during the next 15 years. The most significant event during that time was the organization of a junior college in connection with the high school at Joliet, Ill., in 1902. This institution is now perhaps the oldest junior college in operation, and its apparent success of 16 years speaks much for the junior college movement as a whole.



GRAPH III.—Total number of junior colleges in operation each year from 1907 to 1917.

In 1907 the legislature of the State of California passed an act permitting high schools to offer the first two years of standard college work in addition to the regular four-year high-school course. The decade since that time has witnessed the rapid growth of that idea. A number of public high schools in California, Illinois, Michigan, Minnesota, and Iowa are now offering one or two years of standard college work. During the same period, and especially since 1911, when the University of Missouri launched a vast educational experiment by accrediting the small colleges of that State, the junior college idea has made wonderful progress in connection with the small and poorly equipped colleges of the country. For various reasons, considered in another chapter, an ever-increasing number of these institutions, such as those existing in Missouri, Texas, and other Southern States, are accepting gladly this readjustment. The success of the movement so far as these institutions are concerned seems to be assured.

The rapidity of this growth is indicated in Table 3 and Graphs II and III. Of the 76 junior colleges replying to the questionnaire, 69 have been organized since 1907. The median date for the organization of these 69 institutions is 1907. This means that half of that number have been established within the last three years, a rate of growth that must certainly be recognized as significant. As the underlying reasons for this growth have already been discussed, we may pass now to a consideration of the various types of junior colleges in operation at present and the number and distribution of each type.

2. VARIOUS TYPES OF JUNIOR COLLEGES.

As we have already indicated, the junior college affects and is affected by at least four of our traditional educational institutions—the university, college, normal school, and high school. This interplay of influences resulted in what one may call four different types of junior colleges. These are:

1. The junior college or lower division of the university.
2. The normal school accredited for two years of college work.
3. The public high school extended to include the first two years of college work.
4. The small private college which has limited its course to two years beyond the standard high school.

The close relation existing between the general influences and the types of institutions resulting has been roughly illustrated in Graph IV.

Consideration will be taken in order of each of these types, speaking briefly of the nature, organization, number, and distribution of each.

TABLE 3.—*Growth of the junior college movement from 1907 to 1917*

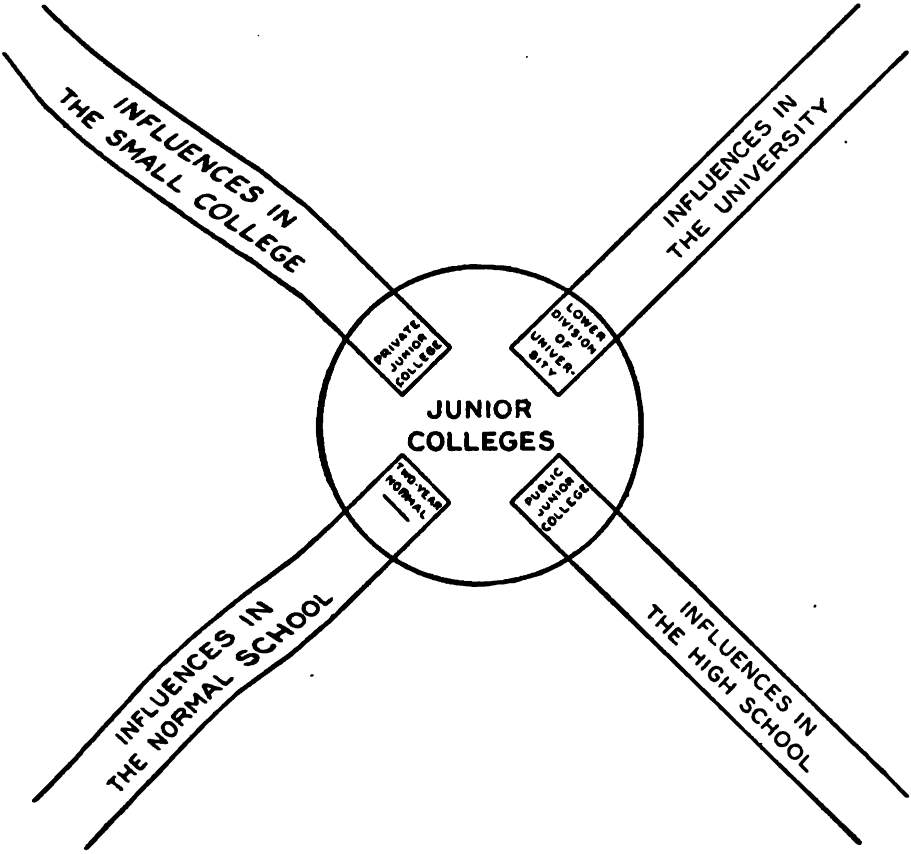
Year:	Number organized.	Year:	Number organized.
1907	2	1914	9
1909	2	1915	15
1910	5	1916	15
1911	3	1917	7
1912	5	Total	69
1913	6		

Median year, 1915.

1. THE JUNIOR COLLEGE IN THE UNIVERSITY.

Mention has already been made of the organization of a junior college at the University of Chicago and of the so-called "lower division" at the University of California. This organization is still maintained in these institutions, which justifies their classification under the above heading. To these must be added the University of Washington, which more recently has adopted the same plan.

In these three institutions there is at present a distinct recognition of the junior college idea as affecting university organization. Each has divided its traditional four-year course into two quite distinct divisions. The lower division, or junior college, includes the first two years; and the upper division, or senior college, the last two years of the standard college course. In order to show that this distinction is not in name only, it may be well to consider at length the organization of these institutions.


INFLUENCES IN THE SMALL COLLEGE
INFLUENCES IN THE UNIVERSITY
PRIVATE JUNIOR COLLEGE
LOWER DIVISION OF UNIVER-SITY
JUNIOR COLLEGES
TWO-YEAR NORMAL
PUBLIC JUNIOR COLLEGE
INFLUENCES IN THE NORMAL SCHOOL
INFLUENCES IN THE HIGH SCHOOL

GRAPH IV.—Influences that have contributed to the origin and development of the various types of junior colleges.

In the circular of information of the University of California we find the following regulations:

> The work of the lower division comprises the studies of the freshman and sophomore years. The junior certificate markes the transition from the lower division to the upper division of the undergraduate course. All candidates for the bachelor's degree in the college of letters must qualify for the junior certificate before proceeding to the upper division. * * * For the junior certificate, 64 units of university work are required, in addition to 45 units required for matriculation, making a total of 109 units. A surplus matriculation credit does not reduce the amount of work (normally 64) required in the lower division (except by examination or advanced work in the same field completed successfully). These 64 units of the lower division may normally be completed in two years, but students are required to remain in the lower division only until they are able to complete the requirements for a junior certificate.

The interesting thing about these requirements is the combining of admission and lower division credits in the total of 109 required, and the possibility of the student completing this amount in less than two years after leaving high school. It should be said that, in a recent report of a committee of this university, these two features were severely criticised and changes suggested. It was said that the whole matter was up for discussion, but that it was doubtful whether any change would be made at present. The work as now organized in this institution most certainly considers the first two years of the university as an extension of the secondary school course and does not permit specialization until the student is enrolled in the upper division.

The bulletin of the University of Washington for April, 1917, contains the following significant statements:

> The work of the lower division comprises the studies of the freshman and sophomore years of the undergraduate curriculum and leads to a junior certificate. The work consists primarily of the elementary or introductory courses of the various departments. Its aim is to supplement the work of high school and to contribute to a broad general training in preparation for the advanced work of the upper division. To receive the junior certificate the student must have earned not less than 60 college credits and must have completed in high school and college together the amount of work specified in the subjects mentioned below. The object of these requirements is to secure for the student a knowledge of a wide range of subjects: to distribute this knowledge over the fundamental fields. To this end the high school and college are viewed as essentially a unit.

It will be of interest to know that in the detailed statement of the requirements for the junior certificates in this bulletin four groups of subjects are mentioned: (*a*) Those required in high school; (*b*) those required either in high school or college; (*c*) those required in college; (*d*) those conditionally required in college.

Here again is found the junior college idea strongly emphasized in the close relation of the high school and first two years of college work and the recognition of the end of the sophomore year rather than graduation from high school at the close of the period of secondary education.

The University of Chicago has maintained the junior and senior college plan of organization since the days of President Harper. In this institution the "junior colleges" include the first and second years of residence. After completing the requirements of the junior colleges and receiving the title of Associate, students pass for their third and fourth years to the senior college. The junior and senior colleges have their separate administrative officers and regulations and are treated in every way as quite distinct.

The requirements for admission and for graduation for the junior college in this institution are similar to those already mentioned, and further discussion of this feature will not be necessary here. Attention is called, however, to the regulation relative to college work done in high schools as a further evidence of the recognition of the junior college idea. In the circular of information for April, 1918, we read:

> The University of Chicago is prepared to encourage any adequately equipped secondary school to extend its work so as to cover the work now offered in the freshman and sophomore years of the college. Any high school which is prepared to undertake such work can come in contact with the junior college officers of the university with a view to organizing advanced courses. The university aims to develop this intimate cooperation with a view to promoting wherever possible the enlargement of the secondary school curriculum.

The three institutions mentioned above are probably the only three that now maintain a distinct organization for the upper and lower divisions of the university or standard college course. Many other institutions, however, have recognized the junior college idea to a greater or less extent. For further information the reader is referred to the chapter on the accrediting of junior colleges. A point of special interest to be noted in this connection is the recent recommendation of President Butler, of Columbia University. (See Chapter III.)

2. THE JUNIOR COLLEGE IN NORMAL SCHOOLS.

As a result of a tendency, previously discussed, on the part of normal schools to undertake college work, there has appeared in several States what may be called a second type of junior college. This is the normal school accredited for two years of college work. The chief justification for classifying these institutions as junior colleges is the fact that they are so referred to by several of the State institutions and State departments of education in replying to the questionnaire. In a number of the States they are the only junior colleges reported.

It has not been thought advisable, considering the limits of this investigation, to discuss in detail the work and organization of these institutions. So far as known, they are typical normal schools, interested primarily in the training of teachers. They have, however, found it to their advantage for one reason or other to undertake certain standard college work; in some cases the entire four years are offered. Naturally, this practice was soon followed by a demand for the accrediting of the work offered. The situation was thus in many respects similar to that of the small college. Many of the normal schools might safely be intrusted with two years of work at least, but for obvious reasons should not expect to do more. The result is that State legislation and university regulations have officially recognized these institutions as junior colleges. The extent of this practice may be inferred from the following outline which is based upon facts gathered from replies to the questionnaire. It is not claimed that these data are at all complete.

PRESENT STATUS OF THE RECOGNITION OF NORMAL SCHOOLS AS JUNIOR COLLEGES.

Arizona.—Graduates of State normal schools are entitled to 30 units blank credit at the university.

Indiana.—One normal school accredited as a junior college.

Michigan.—One normal school accredited as a junior college.

Minnesota.—Graduates of normal schools receive one or two years of credit in university, according to course which they have taken and which they expect to pursue; five institutions are thus accredited.

North Dakota.—Graduates of the State normal schools receive credit at the university according to the amount of college work completed, up to two full years.

Nebraska.—Three normal schools are approved for two years of college work.

Oklahoma.—Graduates of seven normal schools are given credit at the university according to the amount of freshman and sophomore work completed.

Utah.—Standards have been established for normal schools which offer two years of college work. These agree substantially with junior college standards of other States.

West Virginia.—Six normal schools are offering college work with a definite understanding as to the amount of credit that will be received at the State university.

Wisconsin.—The State normal schools have been authorized by law to give a two-year college course which is accredited at the State university. Five institutions are now offering such a course.

3. THE PUBLIC JUNIOR COLLEGE.

The type of junior college that is attracting most attention at present is that which has arisen as a result of the extension of the traditional high-school course to include the first two years of college work. This institution has been designated throughout this report as a public junior college.

In its typical form it consists merely of the first half of the standard college course offered in the high-school building and taught for the most part by high-school teachers. In contrast with the private junior college, discussed in the following section, it is distinctly a public institution. In most of the States it is supported by tuition and local taxation. In California, where more than half of these institutions are now located, the State legislature has provided for State aid at so much per pupil to supplement local taxation. This provision makes the junior college as definite a part of the system of public education as is the high school.

We have already considered in detail the forces that have operated in the establishment of these institutions. In general, it may be said that they have arisen out of the public demand for increased opportunities for higher education. In this respect they are typical of all American educational institutions. The rapid increase in number of public junior colleges seems to indicate they are filling a real need in the educational system. All of the 21 located in California have been organized since 1907. This is true also of practically all of those reporting from other States. The present status of the movement is shown in the following table:

TABLE 4.—*Public junior colleges.*

States.	Number reported as operating.	Number considered in this report.
California	21	11
Idaho	1	
Illinois	3	1
Iowa	1	
Indiana	1	
Michigan	3	1
Minnesota	5	5
Missouri	2	1
Texas	1	1
Washington	1	1
Total	39	21

4. THE PRIVATE JUNIOR COLLEGE.

Discussion at length has already been made of the forces that have operated in the establishment of the private junior college. In view of this, as well as of the fact that a large part of this entire discussion is devoted to a consideration of the present status of this type of institution, only brief mention of it will be necessary here.

The typical private junior college as it exists in a large number of the States, especially in the South, is a denominational institution offering, in addition to various other courses, a four-year high-school or academy course, and in addition substantially the first two years of college work. For the most part these institutions were formerly four-year colleges, at least so on paper, which have been for various reasons reduced to limit their work to that for which they are qualified. They differ from the public junior college in purpose, organization, and control, and hence deserve mention as a special type. The increase in the number of private junior colleges has been rapid, as the following statistics will indicate.

TABLE 5.—*Private junior colleges.*

States.	Number reported as operating.	Number considered in this report.
Arkansas	1	1
California	4	2
District of Columbia	1	1
Georgia	3	2
Illinois	7	6
Indiana	3	2
Iowa	1	1
Kansas	1	....
Kentucky	5	4
Louisiana	3	3
Massachusetts	1	1
Minnesota	4	....
Mississippi	2	2
Missouri	14	7
North Carolina	3	3
Nebraska	1	....
Ohio	2	1
Oklahoma	1	....
South Dakota	2	....
Pennsylvania	2	1
Tennessee	3	3
Texas	16	11
Virginia	9	5
West Virginia	2	1
Wisconsin	2	1
Total	93	57

3. SOURCES OF SUPPORT.

The material included in this section is based upon the replies to question 2 of the questionnaire to junior colleges. (See Appendix A.) Fifty-two private and 19 public institutions answered the question at least partially. At best, however, the returns are altogether too incomplete to enable one to state any very reliable conclusions. There is need for a more careful investigation of this phase of our problem.

A summary of the replies has been made in Tables 6, 7, and 8. On the basis of these statistics we are perhaps justified in stating the following conclusions:

1. The support of public junior colleges is derived from three principal sources: Tuition, taxation, and State aid. Taxation, one would expect, occupies first place. Something of the relative value of each of these sources is indicated in the following table:

TABLE 6.—*Sources of support of public junior colleges.*

[Based upon the replies of 19 institutions.]

Source.	Number of schools.	Per cent.
Taxation	16	84
State aid	9	47
Tuition	6	32

Of the 19 schools, 16 mentioned taxation, 9 mentioned State aid, and 6 mentioned tuition among the sources of support. The interesting point in this is the extent to which the junior college is being recognized as an integral part of the system of public education and hence an object of public support.

Perhaps the most significant example of State recognition of the public junior college comes from California. In that State the law provides for the support of these institutions on the same basis as the high schools. This law provides in part as follows:

> In apportioning the county high-school fund, the superintendent of schools of the county shall count the average daily attendance of all students enrolled in the junior-college courses as a part of the average daily attendance of each high-school district in which such students are enrolled. * * * The State controller, in making the annual estimate of the amount necessary for the support of the high schools, as required in section 1760 of the Political Code, shall include in the basis of his estimate the average daily attendance of all students enrolled in junior-college courses, and the superintendent of public instruction, in apportioning the State high-school fund, shall count the average daily attendance of students enrolled in junior courses as a part of the average daily attendance of each high-school district in which such students are enrolled.

The amount received under these provisions is $75 per student. Of this amount, $60 comes from the county fund and $15 from the State.

1. The support of private junior colleges is derived mainly from the following sources: Tuition, endowment, church budget, and offerings and donations. There is also a relatively large amount reported from miscellaneous sources, which include income from board and room. Something of the relative value of these sources may be inferred from the following tables:

TABLE 7.—*Sources of support of private junior colleges.*

[Based upon replies of 52 institutions.]

Sources.	Number of schools.	Per cent.
Tuition	50	96
Endowment	22	42
Church budget	26	50
Offerings and donations	18	33
Miscellaneous	18	33

Of the 52 institutions replying, 50 mentioned tuition, 22 endowment, 26 church budget, and 18 offerings, donations, and miscellaneous sources.

TABLE 8.—*Sources of support of private junior colleges, showing amount and per cent from each.*

[Based upon the replies of 41 institutions.]

Sources.	Colleges.	Amount.	Per cent.
Tuition	41	$822,595	57.0
Endowment	19	253,450	17.5
Church budget	20	73,686	5.0
Offerings and donations	14	30,770	2.0
Miscellaneous [1]	14	267,987	18.5
Total		1,448,488	

[1] Includes all income from board and room.

Of these sources the largest amount is derived from tuition and a comparatively small amount from endowment. An examination of the above table shows that fully 75 per cent of the total income of these institutions is derived from sources that can not be depended upon from year to year. In other words, the fixed and assured income is relatively small. An increase in the amount of permanent productive endowment would remedy this situation. Certainly $100,000 should be the minimum for such.

4. COURSES OF STUDY.

In order to determine what was being taught in the junior colleges, an examination was made of the latest courses of study available of 28 private and 19 public junior colleges. In Tables 9 and 10 there will be found a list of all the subjects offered by each type of institution ranked in order of frequency of mention.

An examination of these tables enables one to draw some interesting conclusions. Among these may be mentioned the following:

1. The traditional freshman and sophomore college subjects rank highest in frequency of mention. The 11 highest in the private junior colleges were: English, history, mathematics, Latin, German, chemistry, physics, botany, Bible, psychology, and education. The 10 highest in the public institutions were: English, history, mathematics, chemistry, French, German, economics, Spanish, physics, and Latin. From this it is easy to see that English, history, mathematics, and foreign language constitute the bulk of the curriculum in both types of institutions.

2. The attention of the reader is called to the relative prominence of Latin in the private junior-college subjects and to the fact that in the public institutions it is displaced by the modern languages. The former adheres more closely to the traditional program of studies.

3. Another feature worthy of mention is the fact that in private junior colleges education ranks tenth, as compared with twenty-ninth in the public institutions. Sixty per cent of the former and only 16 per cent of the latter offer courses in education. It is evident that the training of teachers is considered to be one of the special functions of the private junior college.

TABLE 9.—*Subjects offered by 19 public junior colleges, listed in order of frequency.*

English	19
History	19
Mathematics	19
Chemistry	19
French	16
German	15
Spanish	13
Physics	13
Economics	13
Latin	12
Psychology	11
Zoology	10
Botany	9
Biology	8
Mechanical drawing	8
Machine shop	7
Art	7
Home economics	7
Commerce	6
Philosphy	6
Public speaking	5
Surveying	5
Music	5
Greek	5
Geology	4
Sociology	4
Electrical engineering	4
Astronomy	4
Agriculture	3
Education	3
Physiology	3
Hygiene	2
General engineering	2
Architecture	2
Italian	2
Entomology	1
Dramatics	1
Printing	1
Plumbing	1
Physiography	1
Elementary law	1
Journalism	1
Mineralogy	1
Civil engineering	1
Mechanical engineering	1
Norwegian	1
Ethics and logic	1
Total	302

TABLE 10.—*Subjects offered by 28 private junior colleges, listed in order of frequency.*

English	28
History	28
Mathematics	28
Latin	28
German	25
Chemistry	24
Physics	19
Botany	18
Bible	18
Psychology	17
Education	17
Economics	16
Spanish	15
Greek	14
French	12
Philosophy	11
Home economics	11
Music	9
Zoology	9
Biology	6
Public speaking	6
Sociology	6
Ethics and logic	6
Italian	5
Physiology	5
Agriculture	4
Art	4
Geology	4
Journalism	2
Hebrew	2
Commerce	1
Machine shop	1
Hygiene	1
Astronomy	1
Total	401

Two factors should, however, be considered which might serve to modify this conclusion. In the first place the private colleges were at one time four-year colleges, and hence may have inherited the courses in education from their former curriculum. In the second place the difference in the location of these institutions may have been a deciding influence in the choice of courses of study. For example, a large per cent of the public junior colleges are in California, where the training of teachers is well provided for. On the other hand, a number of the private colleges are in Texas, in which State they were established especially for the purpose of providing better opportunities for the training of teachers.

4. A fact of even greater significance is brought to light when one considers the extent to which these institutions have introduced "finishing" or vocational courses. It will be remembered that in an earlier chapter it was claimed that the junior college should serve as a completion school for a large number of students. In view of this, one should expect to find a relatively large per cent of "finishing" subjects in the curriculums of these institutions. What are the facts?

In the two following tables there is presented a rough selection of subjects which may be considered more or less vocational in nature, together with the number of times each occurs for each type of institution.

TABLE II.—*Vocational subjects offered by 19 public junior colleges.*

Mechanical drawing	8	Printing	1
Machine shop	7	Plumbing	1
Home economics	7	Elementary law	1
Commerce	6	Journalism	1
Surveying	5	Civil engineering	1
Electrical engineering	4	Mechanical engineering	1
Agriculture	3	Total	53
Education	3	Per cent of total	17.5
General engineering	2		
Architecture	2		

TABLE 12.—*Vocational subjects offered by 28 private junior colleges.*

Education	17
Home economics	11
Agriculture	4
Journalism	2
Commerce	1
Machine shop	1
Total	36
Per cent of total	9

It will be noted at a glance that the public college is offering a greater range of subject matter than the private institution. Of the total of 401 subjects mentioned by the 28 private colleges, only 36, or 9 per cent, can be considered as vocational subjects. On the other hand, out of the 302 subjects offered by the 19 public colleges, 53, or 17.5 per cent, may be counted as belonging to that group. If education is omitted from each group, the per cents are 4.5 and 17, respectively.

It is evident that, so far as the course of study is concerned, the public junior college is more of a finishing school than the private institution. The real significance of this fact, however, does not come to light until attention is called to the graduates of these two types of institutions. Of the total number of graduates of the public colleges for the last three years, 73 per cent are continuing their work in a higher institution. On the other hand, only 41 per cent of the graduates of the private colleges are taking advanced work. From the standpoint of the student, then, the courses of study of these two institutions might well be reversed. The private school should be a finishing school, at least a much greater per cent of its courses should be finishing subjects. On the other hand, the public college might well be content with the narrower curriculum. If 59 per cent of the graduates of the private junior colleges can not go on with their university training, it occurs to the writer that these institutions can well afford to offer less of Latin and Greek and far more of vocational work.

5. TRAINING, EXPERIENCE, AND WORK OF TEACHERS.

In the discussion of the relative merits of the small college and the large university one hears much of the difference in the quality of instruction. Advocates of the smaller institutions often assert that students entering a university are taught by inexperienced assistants whose chief interest is research, and that they are grouped together in such large numbers for recitation purposes that personal contact would be impossible even if the latter were capable of and willing to give advice and help. On the contrary, they hold that the small college with its small classes, mature instructors, close contact, and keen personal interest, is the ideal place for the immature high-school graduate for two years at least.

As far as the writer is aware, most of this discussion has been based upon mere opinion, with little or no knowledge of the actual facts. In order to remedy this condition, and particularly because such has direct bearing upon the junior college problem, we have made an effort in this chapter to attack this question directly. It is hoped that the facts presented will put an end to our fruitless discussions and cause us to give credit where credit is due.

The writer recognizes the difficulty that one encounters in attempting to measure, by objective standards, the quality of instruction in an institution or set of institutions. Success in teaching seems at times to be something spiritual or innate, which appears often to operate independently of academic titles and scholastic attainments. We can not say, for example, that because an individual has that much-prized distinction of "doctor of philosophy" that he is as a result necessarily a better teacher. Common observation seems to furnish many evidences to the contrary. It is, however, a very poor recommendation for our scholastic and professional training if we are forced to admit that, other things being equal, the individual who has attained his advanced degree is not better prepared to instruct than those who have not had this additional training. Such an admission we do not believe to be necessary. In the investigation which follows and in the use of objective standards, we have assumed that "other things are equal." As this can neither be proved nor disproved, the evidence herewith presented should be valuable.

In measuring the training and experience of teachers in junior colleges as well as in the other institutions which we have investigated for purposes of comparison, the following items have been considered:

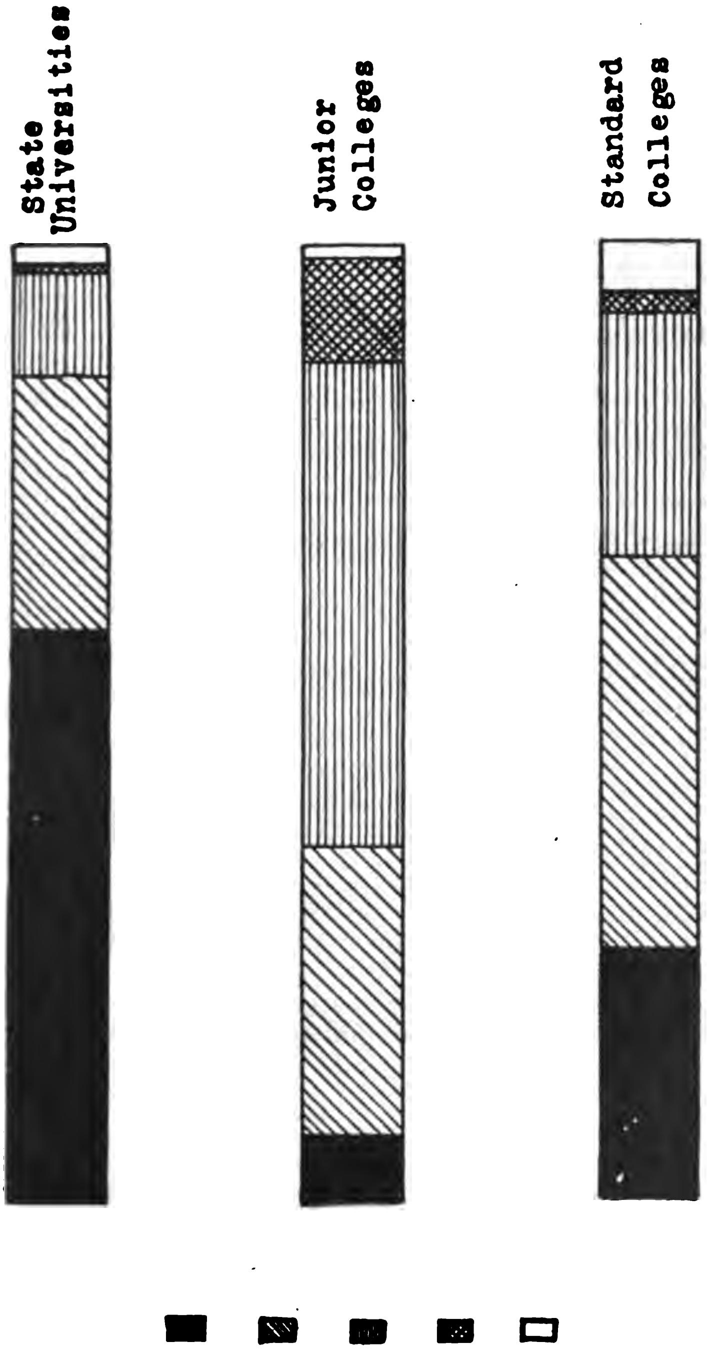
1. The highest academic degree of each instructor.
2. The amount of graduate work of each, measured in semesters.
3. The total years of teaching experience.
4. The total number of recitation periods (clock hours) taught by each per week.
5. The number of periods devoted by each to freshman and sophomore classes.
6. The number of students enrolled in recitation sections.

These points will be considered in the order named. The facts presented are based upon the returns from our various questionnaires (see Appendix). Any discussion necessary as to the reliability of the data used will be given in its appropriate place.

1. ACADEMIC DEGREES.

In this investigation only the highest degree of each instructor was considered. For example, if an individual reported both a master's and a doctor's degree, the latter alone was used in making the tabulations. Under the heading "doctor's degree," all of those having either the degree of doctor of philosophy or doctor of science were counted. Such degrees as doctor of divinity or doctor of literature were counted as unclassified. Under the heading "master's degree" those having the degree of master of arts or master of science were counted, and under the heading "bachelor's degree" all of those having the degree of bachelor of arts, bachelor of science, or bachelor of philosophy were counted. Any other degrees reported were put down as unclassified. There were very few of these, however.

Replies were received from 523 instructors representing 66 junior colleges, from 223 instructors representing three standard universities, and from 58 instructors representing three standard colleges. A summarized statement of the results is shown in Table 13 and Graph V.



GRAPH V.—Academic degrees of instructors of junior colleges as compared with those who instruct freshman and sophomore classes in standard colleges and universities.

A study of this table and graph yields some significant results. It is evident that, if the academic degrees of the instructors alone were considered as a measure of the quality of instruction, we would have to rank the junior colleges as inferior to the standard colleges and universities. Sixty per cent of the instructors of the three universities and 26 per cent of those of the three standard colleges have the doctor's degree, as compared with slightly over 6 per cent of those in the junior colleges. On the other hand, nearly 12 per cent of those offering instruction in junior colleges have no degree, as compared with four-tenths of 1 per cent of those in the universities and less than 2 per cent of those in the standard colleges. The median instructor of the three universities has a doctor's degree, of the colleges a master's degree, and of the junior colleges a bachelor's degree.

TABLE 13.—*A comparative study of the training of the instructors of junior colleges and those of certain standard colleges and universities as shown by degrees.*

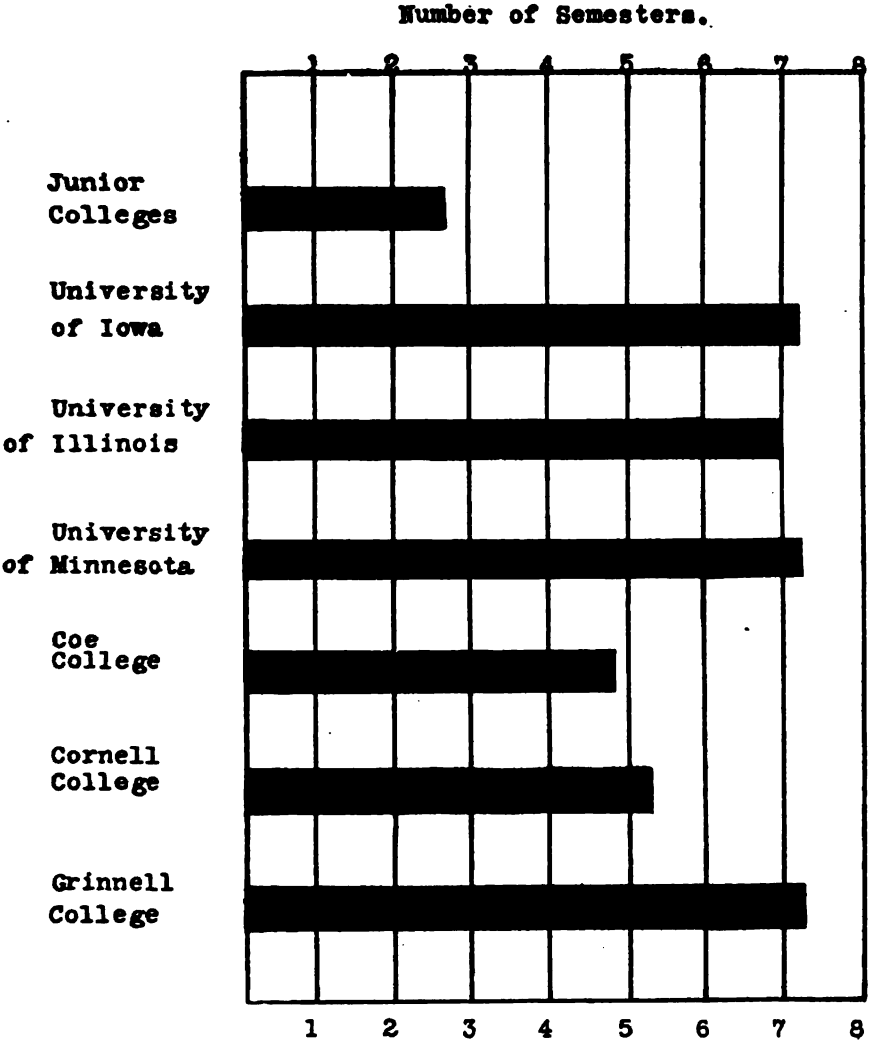
Institutions.	Total instructors.	Doctors.		Masters.		Bachelors.		None.		Unclassified.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Private junior colleges	343	28	8.2	93	27.0	176	51.0	40	11.7	6	1.7
Public junior colleges	180	5	2.8	71	39.5	81	45.0	21	11.7	2	1.1
University of Iowa	74	37	50.0	21	29.0	14	19.0	1	1.3	0	.0
University of Illinois	88	55	62.5	21	24.0	10	11.4	0	.0	2	2.3
University of Minnesota	61	41	67.0	15	24.5	4	6.5	0	.0	1	1.6
Coe College	16	2	12.5	7	44.0	3	19.0	1	6.0	3	19.0
Cornell College	16	5	31.0	7	44.0	4	25.0	0	.0	0	.0
Grinnell College	26	8	31.0	10	38.0	8	31.0	0	.0	0	.0
Total junior colleges	523	33	6.3	164	31.0	257	48.0	61	11.7	8	1.5
Total universities	223	133	60.0	57	25.6	25	12.7	1	.4	2	1.3
Total colleges	58	15	26.0	24	41.0	15	26.0	1	1.8	3	5.1

The present minimum standard for an instructor of a junior college, according to various recent attempts at standardization, is a master's degree, or its equivalent. Measured by this standard alone, about 61 per cent of the instructors of the junior colleges would fail to qualify, while only 14 per cent of those of the universities and 33 per cent of those in the standard colleges would fall below this standard.

The significance of these figures is so apparent that further discussion is unnecessary. Of course, it is unfair to consider this standard alone as a basis of comparison, and we hasten to a consideration of other factors.

2. AMOUNT OF GRADUATE WORK.

The results are equally significant if we compare the amount of graduate work done by the instructors of junior colleges with that of the instructors of standard colleges and universities. Replies were received from 469 instructors of 60 junior colleges, 198 instructors representing 3 universities, and 57 instructors representing 3 standard colleges. The summary of these returns is presented in Table 14 and Graph VI, and in the Appendix.



GRAPH VI.—Amount of graduate work of instructors of junior colleges as compared with those of standard colleges and universities.

The amount of graduate work of the instructors of the junior colleges is greatly inferior to that of those offering instruction in the universities and colleges considered in this report. The median amount for the former is 2.5 semesters, or a little over one year of graduate work, as compared with 7 semesters (3½ years) for those in the universities and 6 semesters (3 years) for the standard colleges.

TABLE 14.—*A comparative study of the amount of graduate work in semesters of the instructors of various institutions.*

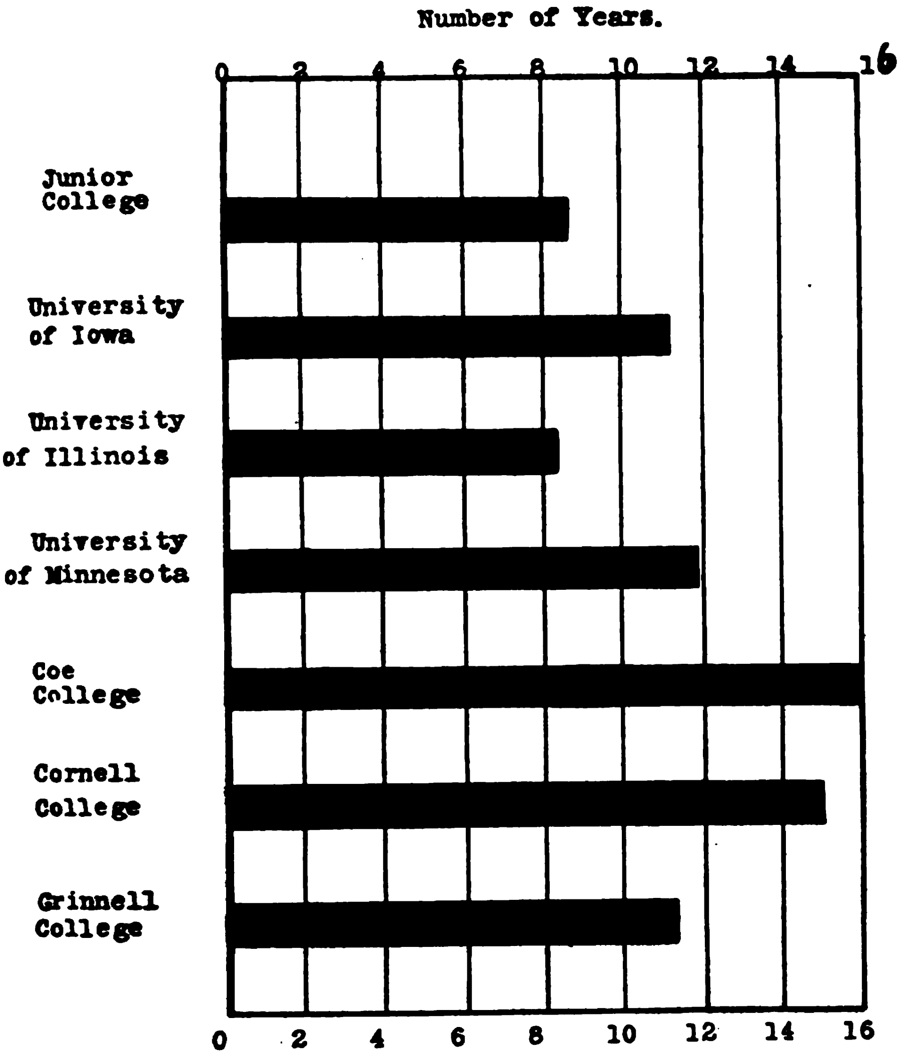
Institutions.	First quartile.	Median.	Third quartile.	Mean deviation.
Junior colleges	1.2	2.5	4.1	1.7
University of Iowa	5.0	7.1	8.8	1.8
University of Illinois	5.1	7.0	8.4	1.8
University of Minnesota	6.1	7.2	8.3	1.3
Coe College	2.3	4.7	6.5	2.2
Cornell College	2.5	5.3	8.5	2.1
Grinnell College	4.8	7.2	8.8	2.3

Compared with present minimum college standards nearly 50 per cent of the instructors of these junior colleges would fail to qualify, and more than 75 per cent would fall below the median of either the college or the university. A critical examination of the returns reveals the fact that 130, or 26 per cent of those replying, report no graduate work at all. It is evident that, in so far as the amount of graduate work is a measure of the training of an instructor and of the quality of instruction, the junior college must again be ranked below not only the standards maintained in standard colleges and universities, but also below those minimum standards that have been specified from the junior colleges themselves. These facts are certainly worth consideration.

3. TOTAL TEACHING EXPERIENCE.

Another measure of the preparation of an instructor, and hence indirectly a measure of his efficiency as a teacher, is the amount of teaching experience which he has had. The figures herewith presented are based upon the replies of 516 instructors representing 69 junior colleges, 218 instructors representing 3 universities, and 58 instructors representing 3 standard colleges. The summary of these returns is presented in Table 15, Graph VII, and in the Appendix.

The result seems to indicate that on the whole the teachers of the junior colleges have less teaching experience than those of the standard colleges and universities considered, the median amount for the former being 8.6 years as compared with 10 years for the university instructors and 12.5 for those of the standard colleges. There is probably not enough difference here to indicate any superiority either way. The facts presented should, however, refute the argument that teachers of freshmen and sophomores in these universities are inexperienced.



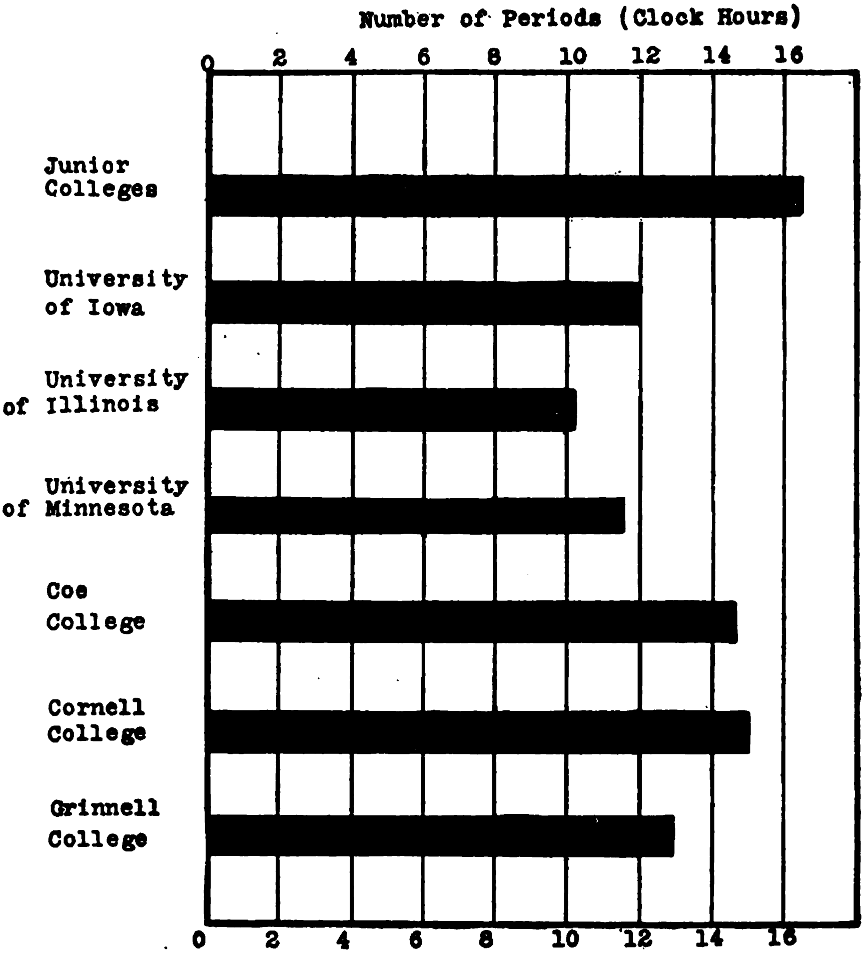
Graph VII.—Amount of teaching experience of instructors of junior colleges as compared with those of standard colleges and universities.

Table 15.—*A comparative study of the number of years of teaching experience of the instructors of various institutions.*

Institutions.	First quartile.	Median.	Third quartile.	Mean deviation.
Junior colleges	3.9	8.7	15.8	4.9
University of Iowa	5.0	11.2	16.9	6.4
University of Illinois	4.7	8.4	13.7	5.6
University of Minnesota	6.2	12.0	17.5	6.3
Coe College	6.0	16.0	20.0	7.5
Cornell College	5.5	15.0	20.5	7.5
Grinnell College	6.2	11.4	15.4	6.3

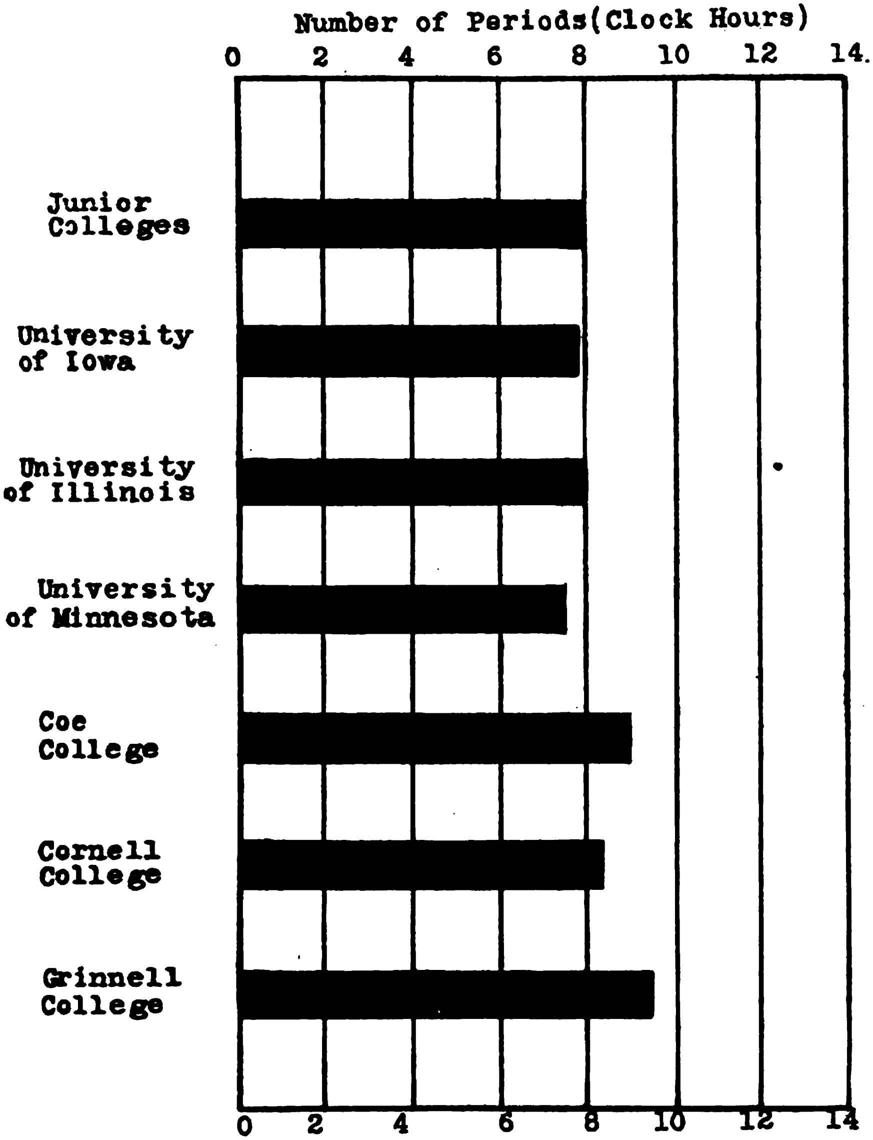
4. HOURS OF TEACHING REQUIRED.

It is evident that instructors who attempt to offer instruction of college grade must not be required to teach as many hours as those in secondary schools. So significant is this factor that practically all of the attempts which have been made to standardize the junior college have mentioned a maximum amount of teaching that can be required of each instructor (see chapter on Accrediting of Junior Colleges). The amount specified by these standardizing agencies varies from 15 to 20 periods (clock hours) per week. The former is the recommended standard, and the latter the maximum amount that should be required.



GRAPH VIII.—Number of recitation periods (clock hours) taught per week by instructors of junior colleges as compared with those of standard colleges and universities.

The data presented in Tables 16 and 17, Graphs VIII and IX, is based upon replies of 522 instructors representing 66 junior colleges, 213 instructors representing 3 universities, and 58 instructors representing 3 colleges. The median number of hours required of the junior college instructors is 16.4, as compared with 11 hours for university instructors and 14.2 hours for instructors in the three standard colleges.



GRAPH IX.—Number of recitation periods (clock hours) devoted by instructors of junior colleges to freshman and sophomore classes as compared with those of standard colleges and universities.

From these figures it seems that, in addition to the fact that the junior college teachers are not as well trained as those of standard colleges and universities, more teaching is required of them and consequently less time is had for preparation. This also is to the disadvantage of the junior college. If we compare these results with the minimum standards mentioned above, we find that at least 50 per cent of the instructors are teaching too much and 25 per cent are teaching more than the highest amount permitted by any of the accrediting agencies. Certainly these facts are worth considering by those who would establish junior colleges as well as by those in charge of such institutions already in operation. Unless an institution has sufficient financial support to maintain a sufficiently large corps of instructors, it can hardly be justified in attempting college work. When an instructor is overloaded, the quality of his instruction will sooner or later fall below that which should be demanded for college work. This should not be tolerated for a moment.

The instructors that we have been considering in the last paragraphs give only a part of their time to the instruction of freshman and sophomore classes. Those in the junior colleges practically without exception teach high-school or academy classes, while those in the standard colleges and universities offer junior, senior, and graduate courses. For this reason it was thought necessary to ascertain the amount of time devoted each week to the first two years of college work in each type of institution. The results of this investigation are presented in Table 19.

TABLE 16.—*Number of 60-minute hours of teaching required per week of instructors in various institutions.*

Institutions.	First quartile.	Median.	Third quartile.	Mean deviation.
Junior colleges	12.46	16.4	19.51	4.35
University of Iowa	8.3	12.0	14.7	3.5
University of Illinois	7.3	10.1	12.9	3.0
University of Minnesota	8.6	11.5	13.8	2.8
Coe College	13.3	14.6	17.3	3.3
Cornell College	12.5	15.0	17.0	3.7
Grinnell College	9.9	12.4	15.2	2.8

TABLE 17.—*Number of 60-minute hour recitations per week devoted entirely to freshman and sophomore classes in the same institutions.*

Institutions.	First quartile.	Median.	Third quartile.	Mean deviation.
Junior colleges	5.0	8.0	12.7	3.6
University of Iowa	3.6	7.8	13.3	4.2
University of Illinois	5.7	8.0	10.7	2.8
University of Minnesota	5.4	7.5	9.5	2.0
Coe College	6.0	9.0	12.5	4.0
Cornell College	6.5	8.3	12.5	2.3
Grinnell College	6.9	9.3	11.5	2.8

From these data it appears that there is comparatively little difference in the amount of time devoted to freshman and sophomore classes in the different institutions. The median for all of the institutions considered fall between seven and nine hours per week. This would seem to indicate that the extra amount of work required of junior college instructors is devoted to high school and academy work rather than to the junior college proper. For this reason the above criticism should probably be a little less severe. It should be made clear, however, that in all cases where periods or hours are mentioned in this discussion that a 60-minute hour or "clock hour" is referred to. All shorter periods (45 minutes) were converted into hour periods before used in our tabulations. This means that all periods here referred to as being devoted to high-school work are hour periods. Two hours of laboratory work is considered as the equivalent of one hour of recitation.

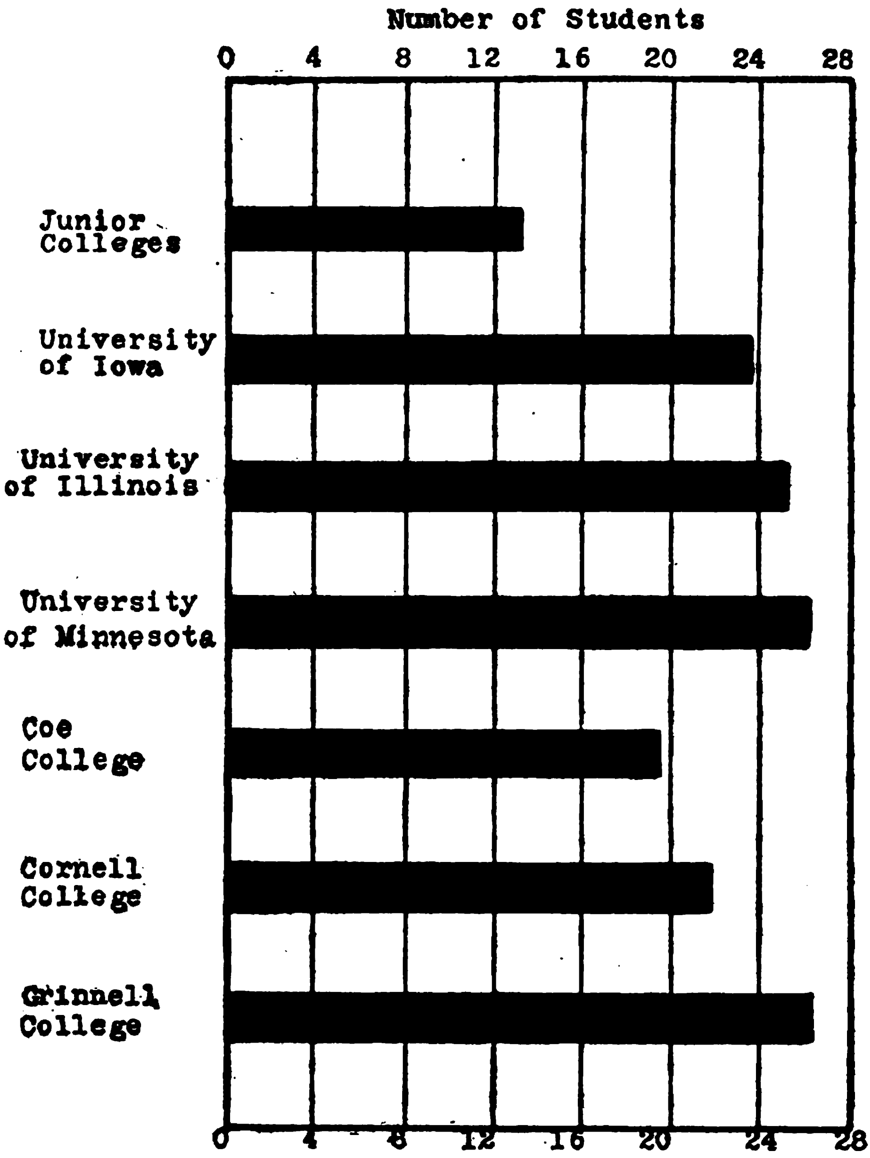
6. THE SIZE OF RECITATION SECTIONS.

The last factor that will be considered in this discussion of the work of the teachers in junior colleges is the size of recitation sections. It will be remembered that one of the arguments frequently offered in support of the small college is that the classes are comparatively small, and hence that the possibilities of personal contact with the instructor are better than in the large classes in the university.

It is evident that before this question can be answered in favor of either type of school we must have something more definite than the terms "small" and "large" on which to base our conclusions. In other words, what are the facts as to the number of students that are permitted to enroll in a single recitation section in the university, and how does this number compare with the number enrolled in the various recitation sections in junior colleges?

The data presented in Table 18, Graph X, and in Appendix are based upon the returns from 66 junior colleges, having a total of 1,648 recitation sections; 3 State universities having a total of 439 recitation sections for freshman and sophomore classes; and from 3 standard colleges having a total of 138 sections for freshman and sophomore classes.

The median enrollment of the recitation sections in the junior colleges is 13, as compared with 29 for the universities and 23 for the standard colleges. Thus, roughly, we may say that the recitation sections in the university are about twice the size of those in the junior college. Further, there is a larger number of large classes (50 students or more) in the universities than in the smaller institutions. Thus less than 1 per cent of the junior classes have more than 50 students, as compared with 2 per cent at the University of Minnesota, 12 per cent at the University of Iowa, and 14 per cent at the University of Illinois. This is of course greatly to the advantage of the junior college.



GRAPH X.—Enrollment in recitation sections of junior colleges as compared with those of standard colleges and universities.

TABLE 18.—*A comparative study of the enrollment of recitation sections of 65 junior colleges with those of the freshman and sophomore classes of certain standard colleges and universities.*

Institutions.	First quartile.	Median.	Third quartile.	Mean deviation.
University of Iowa	....	23.4	....	12.6
University of Illinois	21.1	25.1	29.2	5.5
University of Minnesota	18.3	26.0	34.7	10.7
Junior colleges	6.6	13.1	21.0	7.6
Coe College	12.1	19.4	33.0	10.5
Cornell College	15.2	21.7	26.7	8.6
Grinnell College	15.4	26.2	36.2	12.3

Even after these differences are pointed out, however, one is forced to admit that the difference is not so great as one might be led to expect, from the amount of discussion in current educational literature on the subject. If these universities have in the past been accustomed to grouping first and second year students in large classes, it is evident that the practice has now been discontinued, for the most part at least. For a majority of the classes there seems to be little difference. We are not certain, for example, that a class of 13 is much better than a class of 26 or even 30, other things being equal. It is probable that classes larger than that are undesirable, but within such limits there is scarcely sufficient grounds for argument.

Table 19 is a summary of the important facts gained from the comparative study of the training and experience and work of the instructors of the junior colleges and that of the instructors of freshman and sophomore classes of certain standard colleges and universities.

From this table we find that the median instructor of the junior college has a bachelor's degree; that he has had a little over a year of graduate work, together with 8½ years of teaching experience; and that he teaches classes enrolling about 13 students to an amount of 16½ periods (clock hours) per week.

The median instructor of freshman and sophomore classes of 3 standard universities has a doctor's degree, 3½ years of graduate work, and 10 years of teaching experience. He teaches 11 hours per week in recitation sections enrolling 29 students.

TABLE 19.—*A comparison of the training experience and work of the instructors of junior colleges as compared with that of the instructors of certain standard colleges and universities.*[1]

Institutions.	Degree.	Semesters of graduate work.	Years of teaching experience.	Total hours teaching per week.	Hours in first and second year classes.	Enrollment in each recitation section.
Junior colleges	B. A.	2.5	8.6	16.4	8.0	13
Standard colleges	M. A.	6.0	12.5	14.2	8.5	23
Standard universities	Ph. D.	7.0	10.0	11.0	8.0	29

[1] The figures given in this table are the medians for each type of institution considered. In other words, each institution is here represented by its median instructor.

The median instructor of freshman and sophomore classes of three standard colleges has a master's degree, 3 years of graduate work and 12½ years of teaching experience. He teaches 14 hours each week in recitation sections enrolling 23 students.

If we accept the median instructor of the junior college as representing the minimum standard, and such is certainly sufficiently low, then 50 per cent of the instructors of the junior colleges studied would fail to qualify. As such a standard compares favorably with the standards specified by the various accrediting agencies of the country, these results are certainly significant.

If the median instructor of either the standard college or university were taken as a standard, then fully 75 per cent of the institutions studied would fail to qualify.

It is evident from this investigation that, as far as certain objective standards are concerned, the quality of instruction must be ranked as inferior to that of the three standard colleges and universities which were considered in this report. As stated before, we assume in this case that other things are equal, an assumption which we can neither prove nor disprove. That there are other factors which serve to improve the character of teaching and that these features may vary independently of the objective factors mentioned seems certain. Just what these factors are and how to measure them we are not so sure.

TABLE 20.—*Enrollment in high schools and academies operating in connection with junior colleges for the years 1914–1917.*

Institutions.	1914–15	1915–16	1916–17
Private junior colleges	3,817	4,046	4,731
Public junior colleges	9,023	10,905	11,754
Total	12,840	14,950	16,487

TABLE 21.—*Enrollment by classes in 74 junior colleges for the years 1914–15 to 1916–17.*

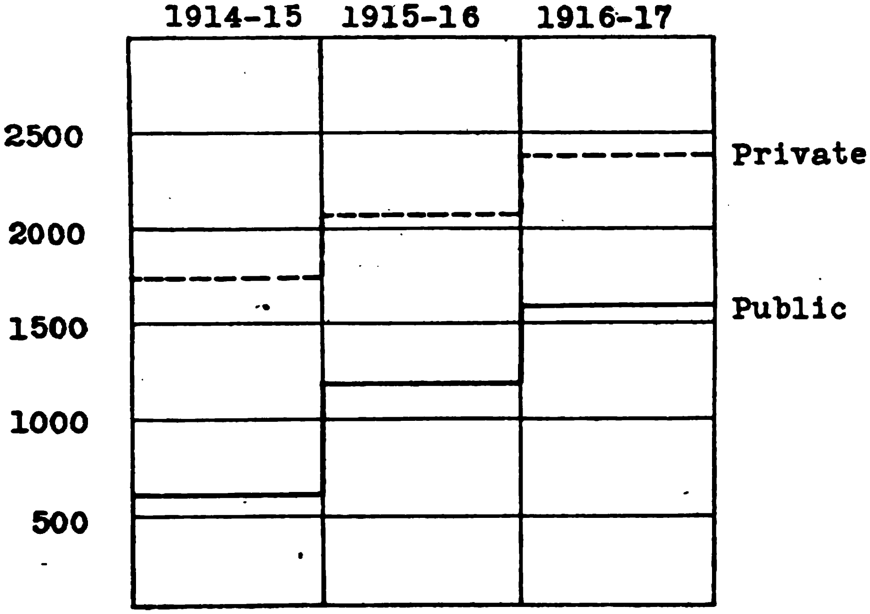
Institutions.	1914–15			1915–16			1916–17		
	Freshmen.	Sophomores.	Total.	Freshmen.	Sophomores.	Total.	Freshmen.	Sophomores.	Total.
Private colleges	1,099	672	1,771	1,268	797	2,065	1,515	857	2,372
Public colleges	485	107	592	932	244	1,196	1,281	306	1,587
Total	1,584	779	2,363	2,200	1,041	3,261	2,796	1,163	3,959

6. ENROLLMENT.

Some indication of the recent growth and present status of the junior college can be found in a study of the enrollment of these institutions from the three years 1914–1917. The data upon which the following tables are based were obtained from the replies to question 11 of the questionnaire (see Appendix A). An examination of the above table reveals the following facts, which may be of some significance:

1. Each of the 74 junior colleges is operated in connection with either a high school or an academy.

2. The high schools reported in connection with the 19 public junior colleges enrolled for the years 1914, 1915, and 1916 totals of 9,023, 10,905, and 11,745 students, respectively. This is an average of about 580 students for each high school. This shows that for the most part public junior colleges have been established only in the larger towns and cities.



Graph XI.—Increase in enrollment in 19 public and 55 private junior colleges for the years 1914-1917.

3. The academies reported in connection with the 55 private junior colleges enrolled for the same years 3,817, 4,046, and 4,731 students, respectively. This is an average of 80 students per school. This indicates that the academies operated in connection with the private junior colleges are very small and are showing little if any growth.

4. The enrollment in the private junior colleges has increased from 1,771 in 1914–15 to 2,372 in 1916–17, an increase of 34 per cent.

5. The enrollment of the public junior colleges has increased from 592 in 1914–15 to 1,587 in 1916–17, an increase of 168 per cent. It should be noted that in each of these cases the increase is partly due to the establishment of new junior colleges. All of the institutions reporting were not in operation in 1914–15.

7. GRADUATES.

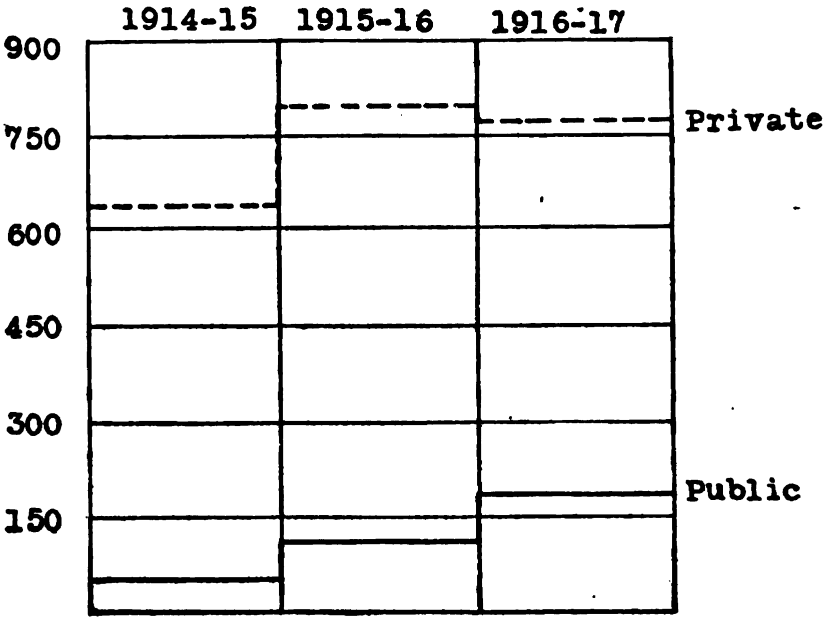
Additional information of importance has been gleaned from the replies to questions 8, 9, and 10 of the questionnaire (see Appendix A). These facts are summed up in the following tables:

TABLE 22.—*Number of graduates of 12 public junior colleges for three years and the number and per cent of these continuing their work in higher institutions.*

Years.	Number graduating.	Number continuing.	Per cent continuing.
1915	59	47	80
1916	127	100	79
1917	184	122	67
Total	370	269	73

TABLE 23.—*Number of graduates of 53 private junior colleges for three years and the number and per cent of these continuing their work in higher institutions.*

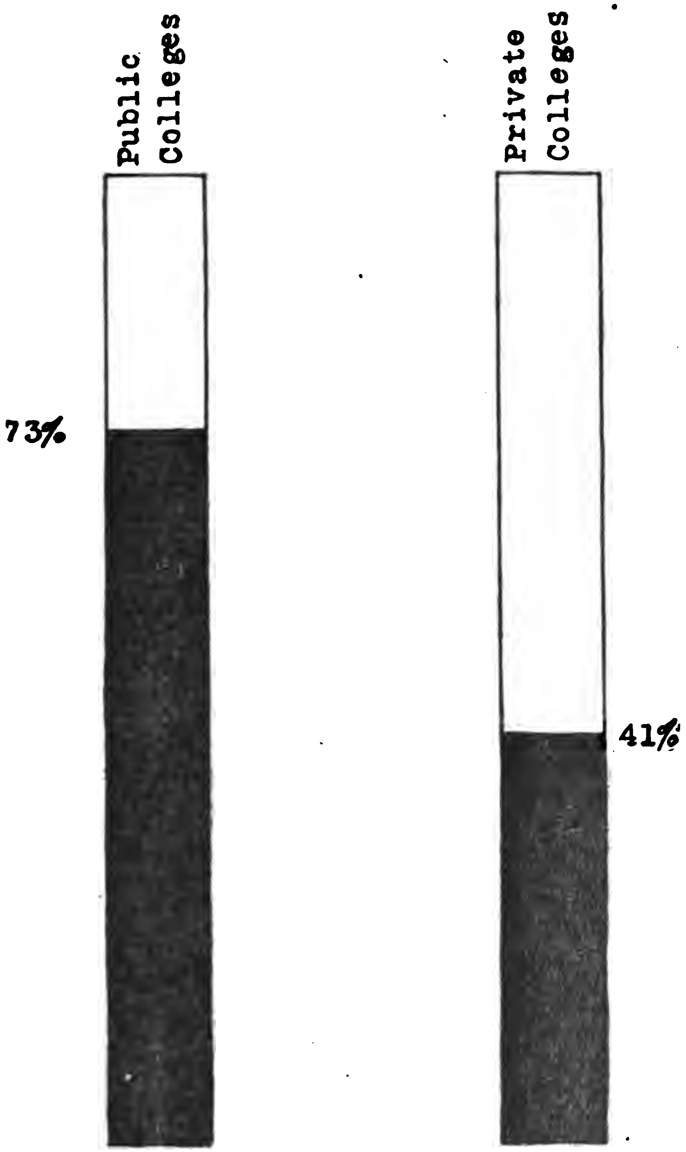
Years.	Number graduating.	Number continuing.	Per cent continuing.
1915	649	263	40
1916	793	332	42
1917	783	315	40
Total	2,225	910	41



GRAPH XII.—Increase in number of graduates from 12 public and 53 private junior colleges for the years 1914-1917.

The following points are perhaps of sufficient significance to deserve special mention:

1. Of the 55 private junior colleges replying, 33 grant no degree whatever to their graduates, 15 grant the degree or title of "Associate in Arts," while 5 grant the bachelor's degree. The latter, however, is not given for the completion of merely junior college work.



GRAPH XIII.—Per cent of graduates of 12 public and 53 private junior colleges who continued their work in higher institutions for the years 1914-1917.

2. Of the 19 private junior colleges replying, 18 grant no degree whatever and 1 grants the degree of "Associate in Arts."

3. A total of 59 were graduated from the public junior colleges in 1915, as compared with 184 in 1917, an increase of 211 per cent.

4. A total of 649 were graduated from the private junior colleges in 1915, as compared with 783 in 1917, an increase of about 21 per cent.

5. Of the 370 graduating from the public junior colleges for this period of three years, 269, or 73 per cent, continued their college work in a higher institution.

6. Of the 2,225 graduating from the private junior colleges during the same period of years, only 910, or 41 per cent, continued their college work in a higher institution. This indicates that the private junior college is, for a large per cent of its students, a completion school, and further, that it is much more so than the public college. This point has already been discussed in connection with the course of study.

Chapter V.

ACCREDITING OF JUNIOR COLLEGES.

In this chapter there will be presented a statement of the attempts that have been made to standardize the junior college by various accrediting agencies. The material presented is based for the most part upon the replies of 49 colleges and universities and 36 State departments of education to the questionnaires (see Appendixes B and C). Each State in the Union is represented by at least one reply.

In the outline which follows, the States will be named in alphabetical order, and under each there will be given any legislation that has been enacted relative to the junior college or any standards that have been established by any accrediting agency in the State. The names and addresses of any institutions that have been accredited as junior colleges will also be given.

At the close of the chapter an attempt will be made to sum up all of these regulations into a somewhat detailed definition of a standard junior college.

ARIZONA.

There are no junior colleges in Arizona, but the movement is being agitated. Graduates of the State normal schools are entitled to 30 units blanket credit in the University of Arizona.

ARKANSAS.

The University of Arkansas has approved Crescent College, Eureka Springs, Ark., as a junior college. The only basis of approval that is specified is that the work offered be equivalent to that of the first two years of the university.

It is reported that two other colleges of the State expect soon to become standard junior colleges: Galloway College, Searcy, and Central College, Conway.

CALIFORNIA.

In 1907 the Legislature of California passed the following act:

> The high-school board of any high-school district, or trustees of any county high school, may prescribe postgraduate courses of study for the graduates of such high school, or other high schools, which courses of study shall approximate the studies prescribed in the first two years of university courses. The high-school board of any high-school district, or trustee of any high school wherein such postgraduate courses of study are taught, may charge tuition for pupils living without the boundaries of the district or county wherein such courses are taught.

In 1917 the junior college was made a part of the secondary school system by the following enactment:

Junior College May be Established in Districts with a Valuation of $3,000,000 or More.

The high-school board of any high-school district having an assessed valuation of $3,000,000 or more may prescribe junior college courses of study, including not more than two years of work, and admit thereto the graduates of such high school, the graduates of other high schools and such other candidates for admission who are at least 21 years of age and are recommended for admission by the principal of the high school maintaining such junior college courses. Junior college courses of study may include such studies as are required for the junior certificate at the University of California, and such other courses of training in the mechanical and industrial arts, household economy, agriculture, civic education, and commerce as the high-school board may deem it advisable to establish.

The Board Shall Adopt Regulations Governing Courses.

The high-school board shall adopt regulations governing the organization of such courses of study and shall prescribe requirements for graduation from such courses; provided that the minimum requirement for graduation from junior college courses of study shall be at least 60 credit-hours of work. A credit-hour is hereby defined as approximately three hours of recitation, study, and laboratory work per week carried through one-half year.

Junior Course May be Given in Any School of the District or in Special School.

Courses of study organized under the provisions of this section may be offered in any or all day and evening high schools of the district, or in a separate junior college, as the high-school board may determine.

Average Attendance Included in Regular High-School Attendance.

The attendance of students enrolled in junior college courses of study shall be kept according to regulations prescribed by the State board of education, and the average daily attendance of such students shall be included in the annual report of the average daily attendance of the high-school district required in section 1743 of the Political Code. The superintendent of schools of each county, in making the annual estimate of county high-school fund required, shall include in the basis of such estimate the average daily attendance of all students enrolled in junior-college courses during the preceding school year. In apportioning the county high-school fund the superintendent of schools of the county shall count the average daily attendance of all students enrolled in junior college courses as a part of the average daily attendance of each high-school district in which such students are enrolled.

Such Average Attendance Shall Call for $15 per Pupil Transferred from General Fund to State High-School Fund.

The State controller, in making the annual estimate of the amount necessary for the support of high schools, as required in section 1760 of the Political Code, shall include in the basis of his estimate the average daily attendance of all students enrolled in junior college courses, and the superintendent of public instruction, in apportioning the State high-school fund, shall count the average daily attendance of students enrolled in junior college courses as a part of the average daily attendance of each high-school district in which such students are enrolled.

All Courses Subject to Approval of State Board.

All courses of study prescribed in accordance with this section shall be subject to approval by the State board of education, and no State high-school funds shall be apportioned to any high-school district on account of the attendance of students enrolled in junior college courses unless such courses have been approved by the State board of education.

In May, 1918, the committee on credentials of the University of California published the following statements of requirements to be met by a junior college desiring to be affiliated with the University of California:

MINIMUM REQUIREMENTS.

A. *Admission.*

The requirements for admission should be the same as those of the University of California (see the Circular of Information, Academic Departments, August, 1917, pp. 98–101). The following statements are especially to be noted: "A graduate of the school (an accredited school), upon the personal recommendation of the principal, accompanied by his certificate that the graduate has satisfactorily completed the studies of the course preparatory to the college he wishes to enter, may, at the discretion of the faculty of such college, be admitted without examination." (1) Recommendations are to be issued only for graduates of the regular courses of the school; (2) recommendations are to be based exclusively upon private "coaching or special examination"; (3) "supplementary" recommendations—for work taken in the high school after the pupil's matriculation in a college or university—are not to be accepted in lieu of matriculation examinations.

B. *Curriculum.*

The curriculum should include, during each year, at least one course of collegiate grade in each of the groups of subjects required for the junior certificate, viz, English, history, mathematics, foreign languages, and sciences.

C. *Equipment.*

1. Laboratory—In addition to the equipment necessary for the operation of the laboratory in a high-school science, the junior college should provide the necessary equipment (as indicated in later pages of this bulletin) for the college course or courses in each science that it plans to give. This will normally cost, for each laboratory, from $1,500 to $3,000.

2. Library—Additions to the library, with proper reference books, will be indispensable in English and history. A certain number of books for reference purposes will also be needed in each of the other subjects. Lists of desirable books will be supplied by the university upon request.

D. *Faculty.*

1. A junior college should be prepared upon starting its work to organize a regular staff of at least five instructors chosen with special reference to their ability to give collegiate work. Of these five it will seldom be possible to choose more than three from the high-school staff. Normally each instructor will confine his work in the junior college to one subject, and will devote his remaining time to high-school teaching, preferably in the same subject or in an allied subject.

2. Instructors should be chosen with special reference to their ability to teach, their personality and their preparation in the subject to be taught. For junior college work the master's degree in the subject in which instruction is to be given will be thought of as the normal minimum scholastic requirement.

3. Instructors should not be allowed to carry more than fifteen 1-hour periods, or twenty 45-minute periods of instruction per week. If administrative work is handled, the amount of instruction should be less.

E. *Salaries.*

In California, junior colleges that have been reasonably successful have paid salaries ranging from $1,400 to $2,400 per year. Several institutions have standardized their salaries at $1,800 to $1,900 per year. If proper instruction is to be secured, adequate salaries will be absolutely necessary.

The foregoing are the minimum requirements the fulfillment of which will justify the committee on credentials of the Univeristy of California in treating a junior college as an affiliated institution. The committee hopes, however, that the junior colleges will not be satisfied with the bare fulfillment of these requirements.

In March, 1918, there were the following junior colleges in California, most of which were fully accredited by the State university:

Anaheim.—Anaheim Union High School.
Auburn.—Placer County High School.
Azusa.—Citrus Union High School.
Bakersfield.—Kern County High School.
Eureka.—Eureka City High School.
Fresno.—Fresno High School.
Fullerton.—Fullerton Union High School.
Hemet.—Hemet Union High School.
Hollywood.—Hollywood High School.
La Jolla.—Bishop's School.
Long Beach.—Long Beach Polytechnic High School.
Los Angeles.—Los Angeles High School.
Ontario.—Chaffey Union High School.
Pomona.—Pomona High School.
Red Bluff.—Red Bluff High School.
Riverside.—Riverside Junior College.
Sacramento.—Sacramento High School.
San Diego.—San Diego High School.
San Luis Obispo.—San Luis Obispo High School.
San Rafael.—Dominican College.
Santa Ana.—Santa Ana High School.
Santa Barbara.—Santa Barbara High School.
Yreka.—Siskiyou Union High School.

GEORGIA.

The State superintendent of schools of Georgia writes:

> We have not accredited any of our institutions as junior colleges. In fact, our laws in this State do not authorize us to classify the higher institutions of learning. As a matter of fact, we have several junior colleges in the State, although they are not listed as such.

IDAHO.

The Idaho Technical Institute, Pocatello, Idaho, a State institution, is the only school of junior college rank. There is no special law governing courses except the law that established this institution in 1915. This institution is by law a part of the University of Idaho, and hence receives official recognition by the latter.

ILLINOIS.

The following are the standards and regulations governing the accrediting of junior colleges by the University of Illinois:

STANDARDS.

1. The admission of high-school students to junior college classes should be limited to students of senior standing and of superior scholarship; "superior scholarship" being interpreted to mean a rank within the first third of the class. The number of even these picked high-school seniors in any junior college class should not in any case exceed one-half of the total membership of that class and should ordinarily be limited to one-third the total membership of the class.

2. The teachers in charge of the junior college work in departments other than manual arts should have a bachelor's degree and should have had in addition at least a year of graduate study in the subject of their department in a university of recognized standing.

3. The teaching schedule of any instructor doing junior college work should be limited to a maximum of 20 recitation periods per week (two laboratory periods being counted as equivalent to one recitation period).

4. The junior college course should be organized and conducted on a collegiate as distinguished from a high-school basis. College texts should be used and should be supplemented with reference or other outside work of collegiate character, and the amount of ground covered in a semester approximates that covered in corresponding college course.

5. Junior college classes should be provided with an adequate equipment of space and of available laboratory and library facilities for strictly college work.

REGULATIONS.

1. For work done in junior college classes for which the above standards are approximately met, substantially hour-for-hour credit will be given at the time of the student's admission to the university, provided that the maximum credit allowed shall not exceed 18 hours per semester.

2. For work done in junior college classes for which the above standards are only partially and semisatisfactorily met, substantially three-fourths credit in college hours may be given at the time of the student's admission, provided that the maximum credit allowed shall not exceed 13½ hours per semester.

3. A student who has been given partial credit on admission under the provision of paragraph 2 above may have such partial credit raised to full credit at the end of his first year's work in the university, provided (1) that he continues in the university any specific subject in which he has received partial credit and makes a grade of not less than 85 in that subject, or (2) if he does not continue any specific subject in the university, that he makes an average grade of not less than 85 in all the subjects of his first year's work.

4. For fifth-year or sixth-year work, which is but slightly differentiated by the above criterions from high-school work, substantially one-half credit in college hours may be given at the time of the student's admission, such credit not to exceed 9 hours per semester.

Accredited Junior Colleges. Correct to Nov. 1, 1917.

Blackburn College, Carlinville, Ill.
Bradley Polytechnic Institute, Peoria, Ill.
Crane Junior College,[1] Chicago, Ill.
Ferry Hall, Lake Forest, Ill.
Frances Shimer School, Mount Carroll, Ill.
Joliet Junior College,[1] Joliet, Ill.
Lane Junior College,[1] Chicago, Ill.
Lewis Institute, Chicago, Ill.
Loyola University, Chicago, Ill.
Monticello Seminary, Godfrey, Ill.
Senn Junior College,[1] Chicago, Ill.

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[1] U. S. Bu. of Educ. Bul. 17, 1917.

Junior Colleges Recognized by the State Education Department of Illinois.

An institution to be ranked as a junior college must have at least four teachers giving their entire time to teaching a course of two full years of college grade (the equivalent of 60 semester hours in a recognized college) and shall require for admission not less than 15 secondary units of preparation in a recognized four-year high school, or its equivalent. Students of recognized junior colleges shall be accorded the rights and privileges of the certificating law.[1]

Bradley Polytechnic Institute, Peoria, Ill.
Lewis Institute, Chicago, Ill.
Joliet Junior College, Joliet, Ill.

INDIANA.

The University of Indiana specifies the following regulations concerning college work in a high school or junior college:

1. No student should be admitted except those who have completed a high-school course such as to entitle them to admission to the freshman class of the college of liberal arts of Indiana University.
2. The teachers must have a baccalaureate degree from a standard college and should have had, in addition, at least a year of graduate study in the subject of their department in a university of recognized standing.
3. The teaching schedule of any instructor doing college work should be limited to a maximum of 20 recitation periods a week.
4. The course should be organized and conducted on a collegiate as distinguished from a high-school basis, and must be approved by the departments concerned at Indiana University. College texts should be used and should be supplemented with reference or other outside work of collegiate character, and the amount of ground covered in a semester should approximate that covered in corresponding college courses.
5. Classes should be provided with an adequate equipment of space and of available laboratory and library facilities for strictly college work.
6. The faculty recommends that the subjects given be such as to conform to freshman and sophomore requirements at Indiana University.
7. The work and equipment of the school shall be subject to inspection by the university.
8. For work done in accordance with these students equivalent college credit will be given up to a maximum of 30 semester hours for a year (36 weeks) of such work and a maximum of 60 semester hours for two years (72 weeks) or more.
9. Students will be admitted provisionally with the standing indicated in section 8. After a student has done at least one semester's work in residence at Indiana University and has made a satisfactory record the provisional standing will be confirmed and the credit entered upon the permanent record of the student at Indiana University.

To date, only two institutions have been officially recognized as junior colleges by the university:

Vincennes University, Vincennes, Ind.
Central Normal, Danville, Ind.

The high school of East Chicago, Ind., has been accredited for one year of college work.

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[1] U. S. Bu. of Educ. Bul. 17, 1917.

IOWA.

The State University of Iowa has given official recognition to one junior college, Graceland College, Lamoni, Iowa. Recently Cedar Valley Seminary, at Osage, Iowa, has been inspected, and it is expected that this institution will be accredited as a junior college in the near future. Two other junior colleges of the State have not been officially accredited:

Denison (High School) Junior College, Denison, Iowa.
Mason City (High School) Junior College, Mason City, Iowa. (Begins regular junior college work in September, 1918.)

KANSAS.

The University of Kansas Senate adopted in 1916 the following regulations concerning the organization and accrediting of junior colleges in Kansas:

> The University of Kansas approves of the idea of the junior college and recognizes it as one of the prominent and important ideas in the trend of education to-day. The university will, therefore, gladly cooperate and advise in every way possible with any educational organization which may contemplate the formation of a junior college.
>
> A junior college must do its work after the manner of a college and must adopt the aims and ideals of a college. This means that the work of a junior college shall be far different from the work of a postgraduate course in a high school or academy. It is necessary that there be a sharp differentiation between the work of the secondary school and that of the junior college, and when the junior college is organized in connection with a high school or academy it is essential that the teaching force of the college be substantially different from that of the secondary school and that adequate library and laboratory facilities be provided for work of college grade. It should be distinctly understood that a junior college is really a college; and that no high school, however large or however well equipped, is in any sense a junior college. The teaching force, equipment, and financial support of a junior college must satisfy the requirements for colleges of the North Central Association of Colleges and Secondary Schools.
>
> It is to be noted that the maintenance of a junior college will involve an expenditure greatly in excess of the expenses of an ordinary high school. Therefore, before organizing a junior college, the community should carefully consider its financial ability to maintain such an institution without impairing the character of the work in the elementary and secondary schools.
>
> Every junior college in the State of Kansas will be visited by a university committee before its work is approved and accredited by the university, and it shall be visited as often thereafter as may seem desirable to the committee.

One institution has been officially accredited as a junior college—Oswego College for Ladies, Oswego, Kans. Several other junior colleges have requested inspection and will be visited this year.

STANDARDS ADOPTED BY THE STATE BOARD OF EDUCATION, JUNE 27, 1917.

In order to obtain the approval of the State board of education the high-school extension (junior college) provided for by chapter 283 of the Laws of 1917 must conform to the following standards:

1. *Buildings.*

Either a separate building or suitable rooms in the high-school building shall be reserved for the exclusive or principal use of the college classes. The building or rooms thus provided shall be appropriately furnished, in keeping with the purpose for which they are to be used, so as to give suitable accommodations in respect to capacity, convenience, health, and tasteful appearance.

2. *Equipment.*

(*a*) Library.—There shall be, in addition to the ordinary high-school library, a library of not less than 500 volumes relating to the work of each year, a total of 1,000 volumes for schools maintaining a two-year college course, selected with particular reference to the needs of college teachers and students. The library shall have a complete card catalogue and be under the supervision of a person qualified to do such work.

(*b*) Laboratories.—For the scientific courses laboratories must be provided and apparatus supplied at an initial cost, for groups of 10 to 20 students, of approximately $1,000 for physics; $500 each for agriculture, botany, chemistry, or zoology. Laboratories shall be furnished with gas, water, and electricity, at whatever additional expense may be necessary.

(*c*) Maps, etc.—For courses in history, language, and literature adequate equipment of maps, pictures, and other illustrative material must be provided.

3. *Departments of Instruction.*

For a two-year course of study instruction shall be provided as follows:

(*a*) English.—A course in rhetoric and composition and a course in English literature. These must follow a standard three-year high-school course in English, and may properly be expanded so as to follow a four-year high-school course.

(*b*) Mathematics.—A two-year course, including college algebra, solid geometry, trigonometry, and analytical geometry, following a two-year course in high-school mathematics.

(*c*) History.—A course of one or two years, including one or more of the following: Modern European history, advanced English history, and nineteenth century American history.

The courses in history must not be a repetition or duplication of the history courses given in the ordinary high-school classes.

(*d*) Science.—One or two years in science selected from the following: Agriculture, botany, chemistry, physics, zoology.

A course of one year in each of at least two sciences should be offered.

(*e*) Foreign Languages.—Instruction in two or more languages must be provided for, selected from Greek, Latin, French, German, Portuguese, and Spanish. These courses should be either for beginners or for these students who have taken preliminary language courses in the high school.

(*f*) Elementary Education.—In the second college year courses may be offered in general psychology, methods of teaching, and school management, the two latter being restricted to students who are definitely preparing to teach.

4. *Recitation Periods.*

In college classes the recitation period shall be 60 minutes, deducting therefrom the time needed for the changing of classes. Laboratory periods shall be twice as long as the recitation period.

5. *Separation of Classes.*

There shall be a distinct separation between high-school and colleges classes. In certain subjects, however, which are essentially the same except in the rate of progress whether taught in high school or college, e. g., solid geometry and elementary courses in language, the combination of students of different classification is permissible to a limited extent, but in no such case shall students be grouped together if there is a difference in more than one year in their classification; and if any college student is enrolled in a high-school class the semester hours of college credit allowed shall not be more than one-half the number of recitation hours in any semester.

6. *Instruction.*

(*a*) Administration.—The superintendent of schools, when the junior college is a part of the public-school system, shall be recognized as the chief administrative officer.

(*b*) Preparation of Teachers.—The standard for teachers, including the superintendent and principal, shall be the completion of at least one year of advanced study following a college course leading to the bachelor's degree. In addition to the above requirements all junior college teachers shall hold legal certificates for high-school teaching.

(*c*) College Faculty.—The college faculty shall include at least one specially qualified person with the preparation above mentioned for each of at least four of the college departments of instruction.

(*d*) Amount of Teaching.—No college instructor shall teach more than four classes daily.

7. *Salaries.*

The salary of each college teacher shall be not less than $1,200 per year.

8. *Admission of Students*

Graduation from the four-year course prescribed for accredited high schools by the State board of education shall be required for unconditional admission to the first year of the college course.

9. *Credits.*

College credits are to be given in semester hours, one semester hour being one hour of recitation per week for 18 weeks. The amount of credit given for one full year's work shall not exceed 32 semester hours, and for two years' work it shall not exceed 64 semester hours.

10. *Recognition.*

The junior college will be subject to inspection by the State board of education, and when approved by the board in respect to buildings, equipment, instructors, and instruction, credits given to students will be recognized and may be applied on the requirements for State teachers' certificate and may be transferred to accredited colleges having four-year courses.

No junior college shall be organized with fewer than 15 students in the first year or 25 students in the first and second years of the college course. When the attendance in the college shall fall below 10 students in the first year or 15 students in the first and second years for a period of nine weeks, such school shall cease to be accredited for college work.

The State board of education desires to make clear the necessity for distinguishing between high-school instruction and junior-college instruction. The increased requirements mentioned above in laboratories, libraries, and preparation of instructors are all intended to make the grade of instruction not only stronger than instruction in the high school, but different in scope and character. In other words, instruction in the junior college must be of the college rank.

KENTUCKY.

The State high-school supervisor of Kentucky plans to attempt a standardization of the junior colleges of this State during the coming year.

The Kentucky Association of Colleges and Universities adopted in 1915 the following plan for the accrediting of junior colleges:

SECTION 1. That the Kentucky Association of Colleges and Universities arrange to formally recognize junior colleges and provide for an accredited relation similar to that now provided for preparatory schools.

SEC. 2. That a junior college, in order to receive this formal recognition and to sustain the accredited relation, must conform to the following requirements:

(*a*) The college must be the essential part of the curriculum of any institution recognized as a junior college; that is, the greater emphasis must be placed upon the work of the college grade. The institution must not be primarily a high school with two years of advanced grade. Junior colleges must publish in their annual catalogues a classified list of all their students.

(*b*) If a preparatory department is maintained, its work must be approved by this association.

(*c*) The minimum requirements for admission to the college classes must correspond with the present requirements of this association.

(*d*) For recognition as a graduate from the junior college a student must complete satisfactorily 30-year or 60-semester hours of work equivalent to that given in the freshman and sophomore years of standard colleges belonging to this association. The standard colleges of this association are to grant full junior standing or 30-year hours of college credit and no more to such graduates. Nongraduate students from accredited junior colleges will be given in the standard colleges of this association standing equivalent to that obtained in the junior college.

(*e*) No junior college shall confer any baccalaureate degree. A junior diploma may be given.

(*f*) The number of teachers, their training, the amount of work assigned to them, the number of college students, the content of the college courses, the methods of instruction, and the resources and equipment of the junior college are all vital factors in fixing the standards of an institution and must be considered by the executive committee in recommending any institution for accredited relations. In particular, the library and laboratory facilities should be adequate to the needs of the college courses offered.

SEC. 3. That the executive committee of this association shall formulate and make known more specifically the requirements to be met by institutions seeking this accredited relation and provide for recognition of junior colleges located in other States.

SEC. 4. To be granted recognition by this association the institution desiring the accredited relation must make formal application to the executive committee and furnish on blanks prepared for this purpose definite information on the subject referred to in section 2, subsection (*f*) above; and an institution shall be recommended for the accredited relation only after personal inspection by members of the executive committee, whose expenses shall be paid by the institution visited.

SEC. 5. List of the accredited junior colleges in Kentucky, to be revised as occasion may require, shall be published by the executive committee, and printed also in the catalogues of the colleges of this institution.

SEC. 6. That officers and members of the faculties of junior colleges in Kentucky accredited by the association and the principals and superintendents of accredited high schools in Kentucky be admitted to associate membership in this association with all of the privileges except that of voting.

SEC. 7. Application of junior colleges to this association for the accredited relation must be filed with the secretary of the association on or before January 1 in any year, to be acted upon by the association at its annual meeting in December following.

MICHIGAN.

Act 146 of the Michigan State Legislature for 1917 provides as follows:

The board of education in any school district of this State having a population of more than 30,000 people, according to the last official census of the United States Government, is hereby authorized and empowered to provide for the establishing and offering in such district of advanced courses of study for high-school graduates, which courses shall not embrace more than two years of collegiate work. Such courses collectively shall be known and designated as the junior collegiate department of the district school system. The board of education shall provide suitable instructors therefor and shall adopt regulations with reference to the admission and conduct of pupils taking such courses and the issuance of diplomas upon the completion thereof: *Provided, however*, That no student who is not a graduate of a high school offering four years of work in this State shall be admitted to any of such courses.

The University of Michigan has approved the work of three junior colleges of that State:

Grand Rapids (Central High School) Junior College, Grand Rapids.
Detroit (Central High School) Junior College, Detroit.
Martindale Normal School, Detroit.

MINNESOTA.

The University of Minnesota adopted in February, 1916, the following standards for judging schools offering one or two years of college work:

STANDARDS FOR JUDGING MINNESOTA SCHOOLS OFFERING ONE OR TWO YEARS OF COLLEGE WORK.

Under the conditions hereinafter specified the university will recognize, toward advanced standing, credits earned in a school giving a college course in part, provided such school complies with the following regulations:

A. GENERAL CONDITIONS.

1. *Amount of work to be recognized.*—The maximum amount of college work to be recognized shall be two years, but in no case shall a second year's work be recognized until a school has for a reasonable length of time demonstrated its ability to do the first year's work satisfactorily.

2. *Limit to length of time of recognition.*—The normal period of recognition shall be one year. Renewals shall be subject to the continued compliance of the school with the standards.

3. *Reports.*—The registrar shall compile a report for each school recognized for advanced credit, such report to show the record of each student in each subject taken in the university.

B. SPECIFIC REGULATIONS.

1. *Applications.*—Application for recognition should be made to the committee on the relation of the university to other institutions of learning before May 1 preceding the year in which work is given for which recognition is desired.

2. *Courses to be offered at the school.*—At least one full year of college work—that is, 14 to 16 credits—must be offered, consisting of courses in at least four subjects, with at least one subject in each of the three groups—language, science and mathematics, social sciences.

3. *Students.*—Students admitted to these courses must be graduates of secondary schools accredited to the university. See also c (1), (*a*).

4. *Teachers.*—(*a*) Training and experience.—All persons giving instruction in such courses shall have done at least one full year's work in a recognized graduate school (ordinarily one year of graduate work in addition to at least two years of undergraduate study in the subject taught) with special attention to the subjects which they teach, and they must also have at least two years' successful experience as high-school teachers or acceptable experience as college teachers.

(*b*) Subjects and hours.—Each instructor shall teach not more than two subjects in the college division, and shall not teach more than one 5-period class in the high school. When, in the opinion of the committee, the college enrollment warrants, he shall give his full time to college teaching. The total amount of his classroom work shall be not more than 17 hours.

(*c*) The work of the instructor shall show evidence of ability to stimulate and hold the interest of his students, so that they shall attain a mastery of and a proper attitude of mind toward the subject taught.

5. *Library and equipment.*—Each department shall be provided with books and apparatus sufficient to carry on its work in a proper manner. The books may be in part in a city library, if they can be drawn out for students' use under suitable regulations. For the information of the teacher, to maintain his interest and to keep him in touch with the subject, the list of books must include both large reference works and two or three periodicals representing scientific or research activity in the subject. Provision must be made for reasonable addition to the library, involving an annual expenditure of from $15 to $75 for each study, depending upon the original equipment available and the nature of the subject.

6. *Inspection.*—Equipment and work of departments in such schools shall be inspected by qualified representatives of the corresponding university departments, appointed by the committee on the relation of the university to other institutions of learning after consultation with the departments. These representatives shall report their findings to the committee.

At the present time five of our high schools have expanded their work to include one or two years of college studies, namely, the following:

Cloquet Junior College, Cloquet, Minn.
Hibbing Junior College, Hibbing, Minn.
Jackson Junior College, Jackson, Minn.
Rochester Junior College, Rochester, Minn..
Faribault Junior College, Faribault, Minn.

A number of private schools are also working on this same basis, and at the present time the work in the following schools is recognized:

Stanley College, Minneapolis, Minn.
Villa St. Scholastica, Duluth, Minn.
St. Benedict's College, St. Joseph, Minn.
St. Johns College, Collegeville, Minn.

Two classes of graduates from the Minnesota normal schools are accepted at the University of Minnesota: (1) Graduates of the advanced graduate course (two years above high-school graduation); (2) graduates of the advanced English or Latin course (five years). The college of education of the University of Minnesota grants 60 credits to graduates of class 1 and 42 credits to those in class 2. The college of science, literature, and the arts grants 30 credits to students of both classes, with the provision that those in class 2 have the special recommendation of the normal school president and be of mature years.[1]

Duluth State Normal School.
Mankato State Normal School.
Moorehead State Normal School.
St. Cloud State Normal School.
Winona State Normal School.

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[1] U. S. Bu. of Educ., Bull. 17, 1917.

MISSISSIPPI.

Several of the denominational colleges for women are endeavoring to be genuine junior colleges. None have been officially accredited to date by the University of Mississippi.

MISSOURI.

The plan of crediting junior colleges in Missouri is in the hands of the State university. The following are the conditions for accrediting as revised in February, 1918:

GENERAL REGULATIONS FOR ACCREDITING.

The minimum requirements which a junior college must meet in order to be accredited are as follows:

1. The requirements for admission to the work of the college must be the equivalent of those of the college of arts and science in the University of Missouri.

High-school subjects which are required for admission are designated in terms of "units." A unit is the equivalent of a subject pursued five 40-minute periods a week for at least 36 weeks, except that in the cases of physical and biological sciences and certain other subjects, two or more of the five periods each week must be double periods. For these exceptions and further information, see the description of units in annual catalogue.

Fifteen units, the equivalent of a four years' high-school course, are required for entrance to the college of arts and science. Three units in English, one unit in mathematics, and two units in one foreign language are fixed requirements, with exception that graduates of secondary schools fully accredited by the University of Missouri are admitted without reference to these fixed requirements. The remaining nine units may be selected from the following list, in which is indicated the maximum and minimum number of units accepted in each subject.

Units accepted by the University of Missouri.

Subjects.	Maximum.	Minimum.
English	4	3
Algebra (elementary)	1½	1
Plane geometry	1	1
Solid geometry	½	½
Plane trigonometry	½	½
Arithmetic (advanced) [1]	½	½
Algebra (advanced) [1]	½	½
History	4	1
American Government	½	½
Latin	4	2
Greek	3	2
German	3	2
French	3	2
Spanish	3	2
Physics	2	1
Chemistry	2	1
General biology	1	1
Botany	2	1
Zoology	2	1
Physiology	1	1
Physical geography	1	½
Agriculture	2	1
Music	1	½
Drawing	2	1
Manual training	2	1
Domestic science and art	2	1
Economics	½	½
Commercial geography	½	½
Bookkeeping	1	½
Stenography and typewriting	1	1
Teacher-training course	2	2

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[1] Must be preceded by elementary algebra and plane geometry. Advanced arithmetic and advanced algebra can not be offered together.

For further information, including list of accredited secondary schools, etc., see annual catalogue.

2. If a preparatory school is maintained in connection with the college, its work must be approved by the University of Missouri.

3. The course of study in the college must be two years in length, and the college year 36 weeks.

4. For graduation from the college, the student must complete satisfactorily 60 hours of work, which must be the equivalent of that required in the first two years in the college of arts and science in the University of Missouri. The specific requirements are as follows: (*a*) Six hours of English; (*b*) five hours of history; (*c*) ten hours of one foreign language; (*d*) three hours of mathematics or logic; (*e*) five hours of physical science (chemistry, physics, astronomy, geology, and geography); (*f*) five hours of biological science (botany, zoology).

These requirements may be waived on the following conditions: If the student presents three units for entrance in the requirement (*b*) or (*d*), or two units in the requirement (*e*) or (*f*), he will be excused from that requirement. If the student presents three units for entrance in one foreign language, he will be excused from five hours of the requirement (*c*), and if the student is prepared to enter the second course in a foreign language, he may fulfill the requirement by taking, in addition to this second course, five hours of another foreign language. Such exemptions do not excuse the student from the requirement of a total of 60 hours for graduation.

By an hour is meant a 60-minute period of class work, or a 120-minute period of laboratory work (exclusive of preparatory instruction and study, work upon notebooks that can be done outside of laboratory, etc.) each week for one semester.

5. Students shall not be permitted to carry for credit work amounting to more than 16 hours a week.

6. There must be a sufficient number of teachers to conduct the work without crowding the classes, or without assigning to individual teachers an excessive amount or variety of work.

7. All college teachers should have had training equivalent to four years' work in a standard college, and it is desirable that they should have completed one year's graduate work.

8. There must be a laboratory for physical science and a laboratory for biological science, each adequately equipped and sufficiently large to permit easily of individual work upon the part of the students.

9. There must be an adequate library equipment.

10. The college must give satisfactory instruction in the work specified in the fourth requirement, and in addition must give satisfactory instruction in other courses which the student may take in completing the conditions for graduation.

The following institutions have been recognized as accredited junior colleges by the University of Missouri:

Central College for Women, Lexington.
Christian College, Columbia.
Cottey College, Nevada.
Hardin College, Mexico.
Howard-Payne College, Fayette.
Kansas City Junior College.
Lindenwood College for Women, St. Charles.
Palmer College, Albany.
Pritchett College, Glasgow.
St. Joseph Junior College, St. Joseph.
Stephens College, Columbia.
Synodical College, Fulton.
The Principia, St. Louis.
William Woods College, Fulton.

MONTANA.

The State Legislature of Montana recently killed a bill providing for junior-college work.

NORTH CAROLINA.

Two colleges in North Carolina offer two years each of college grade work—Weaver College, at Weaverville, and St. Mary's College, at Raleigh. Students completing the work at either of these institutions are given advanced credit by the University of North Carolina, but not full standing. Those entering the bachelor of arts course are required to make good any deficiencies in their work as compared with that of the first two years of the university. Those entering the bachelor of science (all technical) courses are required to spend not less than three years at the university in addition to the two years in the junior college.

NORTH DAKOTA.

There are no so-called junior colleges in the State, but recognition and credit are given for work done by several State schools of a character equivalent to that of the junior college. The State university has made the following arrangements:

> Students entering from the State Science School at Wahpeton receive credit for admission and advanced credit up to two years of college work on certificate.
>
> Students entering from the State Normal and Industrial School at Ellendale and the School of Forestry at Bottineau receive the same credit as students entering from the State school at Wahpeton.
>
> Students entering from the State normal schools at Valley City, Minot, and Mayville, and other normals of equal rank, are granted advanced standing as follows: (1) Graduates from the one-year professional course who are also graduates of first-class high schools are granted 30 semester hours of advanced standing. Graduates from the two-year professional course who are also graduates of first-class high schools are granted 60 hours of advanced standing. In either case students must fulfill our requirements for admission and offer subjects for advanced standing that are in harmony with the group requirements for graduation. (2) Students who are not high-school graduates but have completed the regular four-year or five-year normal course are given 15 and 45 credits, respectively.
>
> Students entering from Fargo College, at Fargo, and Jamestown College, at Jamestown, are allowed credit for admission and also for advanced standing by certificate, their credits being accepted at full value.

NEBRASKA.

There are no institutions in the State which are designated junior colleges. There are, however, certain schools doing two years of collegiate work which are inspected and approved on the same basis as the colleges, and whose graduates are also given the advantage of certification by the department of public instruction.[1]

Chadron State Normal School.
Fremont College, Fremont.
Kearney State Normal School.
Wayne State Normal School.

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[1] U. S. Bu. of Educ. Bul. 17, 1917.

OHIO.

The State Department of Public Instruction of Ohio reports that there has been no official action taken by that State with reference to junior colleges. It adds, however, that the Ohio Mechanics Institute at Cincinnati has definitely taken the rank of a junior college and that Rio Grande College and Franklin and Ashland College have been advised to do the same. Ohio State University is reported as favoring the junior-college idea.

OKLAHOMA.

The normal schools and one collegiate institution of the State are recognized as junior colleges. Their graduates are given credit in the University of Oklahoma for such work of the freshman and sophomore years as they have completed. The recognition of these schools and the method of admitting their students to the university correspond to the practice in the case of the colleges.[1]

Central State Normal School, Edmond.
Colored Agricultural and Normal University, Langston.
East Central State Normal School, Ada.
Northeastern State Normal School, Tahlequah.
Northwestern State Normal School, Alva.
Southeastern State Normal School, Durant.
Southwestern State Normal School, Weatherford.
Oklahoma College for Women, Chickasha.

SOUTH DAKOTA.

No official action. Two institutions in the State rate themselves as junior colleges:

Wessington Springs Junior College.
All Saints High School, Sioux Falls.

TEXAS.

The State Legislature of Texas has recognized the junior colleges of that State in the following enactment:

A person who has satisfactorily completed four full courses in the college of arts and one full course in the department of education of the University of Texas or in any college or university, or in any junior college in Texas ranked as first class by the State superintendent of public instruction upon the recommendation of the State board of examiners, shall, upon presentation of satisfactory evidence of having done the required work, be entitled to receive from the State department of education, a State first-grade certificate valid until the fourth anniversary of the 31st day of August of the calendar year in which the certificate was issued, unless canceled by lawful authority.

Any school applying for approval under the provisions of this act shall pay a fee of $25, and each applicant for teacher's certificate on college credentials shall pay a fee of $1, to cover the expenses of inspection and standardization of approved colleges.

It shall be the duty of the State superintendent of public instruction to appoint a suitable person or persons of recognized college standing, who shall make a thorough inspection of the equipment and standards of instruction maintained in each school applying for approval under this act, and who shall make a detailed report to the State board of examiners for their consideration before any recommendation is made to the State superintendent of public instruction for his approval.

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[1] U. S. Bu. of Educ., Bul. 17, 1917.

The State superintendent shall have each school receiving the benefits of this act thoroughly inspected from year to year as to its standards and facilities of instruction, and he shall have authority to suspend any school from the benefits of this act which fails for any reason to maintain the approved standards of classification.

The State department of education has adopted the following minimum requirements for a junior college of the first class:

1. *Restriction as to name.*—It is preferred that the word "junior" be prefixed by an institution when applying to itself the term "college" and that the work of the college be restricted as hereinafter defined.

2. *Scope of work.*—A junior college shall be an institution that does two years of college work that shall correspond to the first two years of the standard college.

3. *Entrance requirements.*—The requirements for admission to the junior college classes must correspond with the present requirements to the standard college. The junior college records must show how all entrance units have been absolved.

4. *Limitation.*—No junior college shall confer any baccalaureate degree. A junior diploma may be awarded.

5. *Requirements for graduation.*—For graduation from a junior college a student must complete satisfactorily 30 year-hours or 60 semester-hours of work equivalent to that given in the freshman and sophomore years of the standard college. During each year the student may not complete, as a rule, more than one-half of the work required for graduation, except when satisfying entrance requirements.

6. *Requirements for teacher's certificate.*—One course, or year's work, in each of the following subjects: English, history, mathematics, education, science or a foreign language.

7. *The preparatory school.*—If a preparatory school is maintained in connection with the institution, its work must correspond, in so far as it extends, to that of the standard high school, and must be approved by the State department of education. When students are passed from the preparatory school to the junior-college classes, the records must show when, where, and how every unit of work necessary to satisfy entrance requirements has been absolved. These entrance units can be absolved only by work done in a recognized high school, by work in the preparatory school, or by examination. If entrance units are absolved by examination, copies of examination questions, together with examination papers submitted by applicant, must be made part of the records of the college, subject to inspection by the department of education.

8. *Number of departments.*—At least five departments, in each of which are offered two years of standard college work, must be maintained. Four of these departments must be English, history, mathematics, and education. The other may be selected from the following subjects: Science, Latin, a modern language.

9. *Organization of departments.*—The faculty must consist of not fewer than five professors who are heads of departments. It will sometimes be necessary for a professor to teach subjects in more than one department. All the work offered in one department, however, must be taught by one professor, unless there is more work in this department than he can satisfactorily do.

10. *Training of the faculty.*—All teachers in junior colleges must be graduates of standard colleges or be teachers of proved teaching ability. At least half of the heads of departments must have had a year's work in some standard college in advance of the bachelor's degree.

11. *Number of classroom hours per teacher.*—No teacher should be required to do more than 20 hours per week of classroom work.

12. *Laboratories.*—If courses are offered in science, there should be laboratory equipment sufficient for students to make all experiments outlined in all such courses offered by the college.

13. *Library.*—The library should contain at least 2,000 carefully selected volumes.

14. *Material equipment.*—The location and construction of the buildings, and lighting, heating, and ventilation of the rooms, the nature of the laboratories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both students and teachers.

15. *Support.*—The financial support must be adequate to meet the expenses of the institution.

16. *Salaries.*—The matter of salary is fundamental and is one of the criteria by which the quality of instruction may be determined.

17. *Number of students in classes.*—The number of students in recitation sections should be limited to 30. Laboratory sections should be smaller. If larger classes are permitted by the president, it will seriously impair the standing of the college.

18. *General statement concerning curriculum and spirit of administration.*—The character of the curriculum, the efficiency of instruction, the scientific spirit, and the standard of work shall be factors in determining the standing of the institution.

19. *Standing with other educational institutions.*—All courses offered by the junior college should be given in such way that full credit will be given for them in standard colleges. If these courses are based on textbooks, college texts must be used.

Under these requirements the following institutions have been recognized as junior colleges:

Institutions in Texas recognized as junior colleges by the State department of education.

Institution.	Location.	President.
Abilene Christian College	Abilene	J. P. Sewell.
Alexander College	Jacksonville	W. K. Strather.
Burleson College	Greenville	B. E. Masters.
Clarendon College	Clarendon	G. S. Slover.
Midland College	Midland	F. G. Jones.
Meridian Junior College	Meridian	G. F. Winfield.
Our Lady of the Lake College	San Antonio	Rev. H. A. Constantinean.
North Texas Female College	Sherman	J. O. Leath.
Wesley College	Greenville	S. E. Green.
Stamford Junior College	Stamford	J. W. Hunt.
The College of Marshall	Marshall	H. E. Watter.
Thorp Spring Christian College	Thorp Spring	C. R. Nichol.
Wayland Baptist College	Plainview	H. E. L. Farmer.
Westminster College	Tehuacana	J. C. Williams.

The college section of the State Teachers' Association has adopted the following minimum requirements for a junior college:

1. It should require not less than 14 standard units for entrance.

2. It should add thereto two years of college work or fifteen 60-minute hours per week of recitations each year.

3. If courses are offered in science, above the academy, then it should have laboratory equipment sufficient for all the experiments called for by such courses—sufficiency to be measured by the value of the apparatus, which shall be, in chemistry not less than $1,000, in physics not less than $2,000, in biology not less than $1,500.

4. It should have a library of not fewer than 2,000 volumes bearing specifically upon the subjects taught.

5. It should maintain at least five departments, with a professor exclusively in charge of each. In the nature of the case, other teachers would be required. They

might be assistant professors or instructors in more than one department each. As speedily as possible such schools should go from five to six and seven, and even more, full professors. The library and laboratories should not lag in constant growth.

6. No teacher should be required to do more than 25 hours per week of classroom work.

7. No student should be allowed to do more than 15 hours of classroom work per week on a basis of 60 year-hours for graduation, i. e., as a rule the student should be allowed only one-fourth of his degree work per year, unless a student is a conditioned freshman with only half of his work in advance. A student may take, in addition to 15 hours, a given amount of music or other fine arts.

8. The equipment of the teachers should be approximately equal to that of college teachers.

Under these provisions the following institutions have been classified as junior colleges:

Abilene Christian College, Abilene (no science approved).
Alexander College, Jacksonville (chemistry only science approved).
Burleson College, Greenville (chemistry and physics only science approved).
Clarendon College, Clarendon (chemistry only science approved).
Decatur Baptist College, Decatur (no science approved).
Meridian College, Meridian (chemistry only science approved).
North Texas Female College, Sherman (no science approved).
St. Mary's College, Dallas (no science approved).
San Antonio Female College, San Antonio (no science approved).
Stamford College, Stamford (physics only science approved).
Texas Military College, Terrell (no science approved).
Thorp Spring Christian College (no science approved).
Wesley College, Greenville (chemistry and physics only science approved).
Westminster College, Tehuacana (no science approved).

Class B:

Goodnight Baptist College, Goodnight (no science approved).
John Tarleton College, Stephenville (chemistry only science approved).
Midland College, Midland (no science approved).

UTAH.

The State Department of Public Instruction of Utah has appointed a special committee to consider the problem of two years of work in the normal schools of the State. The tentative standards drawn up by this committee are as follows:

1. The completion of a standard four-year secondary course above the eighth grade shall be required for entrance.

2. The completion of two full years of additional work, including adequate training in educational subjects, a thorough review of the common branches, and practice teaching in a training school shall be required for graduation.

3. The number of class hours for the heads of the departments and for students shall not exceed 20 a week.

4. A faculty properly qualified shall be provided, consisting entirely of graduates of standard colleges; and each head of a department shall hold at least a master's degree from a standard college, or have attained eminent success as a teacher, which success shall be determined by the State board of education.

5. A well-equipped training school for observation and practice shall be maintained, such school to cover work in the eight elementary grades.

6. The library shall consist of at least 5,000 volumes, selected with reference to normal school subjects, and exclusive of public ducoments.

7. The laboratory equipment shall be adequate for all laboratory courses offered.

VIRGINIA.

An institution to be registered as a junior college by the State Board of Education of Virginia must present satisfactory evidence that it is doing at least the freshman and sophomore work of a standard college. The junior college may confer a diploma of graduation, but shall not confer any titled degree.

Daleville College, Daleville.
Marion College, Marion.
Mary Baldwin Seminary, Staunton.
Southern College, Petersburg.
Stonewall Jackson College, Abingdon.
Sullins College, Bristol.
Virginia College, Roanoke.
Virginia Intermont College, Bristol.
Virginia Union University (colored), Richmond.

The following minimum requirements for a junior college were adopted by the Association of Virginia Colleges, February 23, 1918:

1. It should require not less than 14 units for entrance to its college department.
2. College methods and college texts should be used in its college department.
3. The preparatory department must be approved by proper accrediting agencies.
4. The course of study in the college must be two years in length, and for graduation 60 semester hours of work required.
5. Students shall not carry for credit, work amounting to more than 16 hours per week, except to remove conditions.
6. It should maintain at least five departments with a specialist at the head of each.
7. All college teachers should have the bachelor's degree from a college of high grade, and it is desirable that each should have the equivalent of a year's study in his special line.
8. No teacher shall be required to do more than 20 hours' classroom work per week.
9. There must be a laboratory for teaching science, adequately equipped for individual work upon the part of students. Minimum suggested: Chemistry, $1,500; biology, $1,500; physics, $2,000.
10. There must be adequate library equipment. Suggestion, 2,000 volumes.
11. The number of college students should be not less than 10 per cent of the total attendance of regular academic students, and in no case fewer than 20.
12. As far as practicable the college students should be segregated from the preparatory students.
13. It shall confer no degrees.

WASHINGTON.

The University of Washington has accredited one institution—the Forest Ridge Academy, of Seattle, for two years' junior college work. The high school at Everett gives a fifth year in modern language, history, biological and physical science, mathematics, and English, all of which is accepted by the university as college work. Two or three other institutions in the State have asked to be inspected with a view of being accredited as junior colleges, but no action has been taken as yet.

WEST VIRGINIA.

The State Board of Regents of West Virginia reports that a school code commission is now at work on a revision of the school laws of the State which will cover fully the subject of junior colleges. It is stated that everything indicates a rapid growth in number and importance of such institutions in that State.

The board of regents of West Virginia University passed in January, 1918, the following conditions whereby university credit could be received for work done in the State normal schools:

> When the students have completed a four-year high-school course, or its equivalent, before entering upon the two years of advanced work required for graduation from the normal schools, credit not to exceed 12 hours in any one branch, or 27 hours for one year's work, or 54 hours in all, will be allowed for work done under the following conditions:
>
> 1. Work to be done by teachers who have completed at least one year of graduate work, in addition to graduation from a standard college or university. (By order of the board, others who have had long experience and acquired efficiency by their own efforts may be admitted to this list, even if the above amount of credit work has not been done in actual school attendance.)
> 2. Work to be done in classes composed entirely of students who have completed a standard high-school course or its equivalent.
> 3. Work to be advanced work in reality and not additional high-school work.
> 4. Textbooks, library, and laboratory facilities to be of such character, kind, and amount as are necessary for work of college grade. Heads of departments at the university will always be ready to help and advise in regard to these items.
> 5. All work for which college credit is asked is to be certified on sheet separate from preparatory work, and to give full information, including time, name of instructor, textbook, time devoted to laboratory work, and credit desired.
> 6. Credit on certificates to be checked by the university committee on entrance, and in case of disagreement it is to be adjusted by the president of the university and the principal of the normal school concerned, and, if this is not possible, by the board of regents.
> 7. Students are not to go to heads of departments or to instructors in regard to credit, but must negotiate directly with above-named committee.
> 8. Extension work to be treated and estimated in accordance with those specifications as to instructors, time, method of doing work, laboratory and library facilities, etc.
> 9. Students thus admitted will so arrange their work at the university as to comply with major and group requirements of the university.

All six State normal schools are offering two years of college-grade work with a definite understanding as to the amount of credit that will be received at the State university. Several private and denominational institutions offer similar normal work. Two of such institutions—Davis and Elkins College, of Elkins, and Lewisburg Seminary, of Lewisburg—offer two years of academic work of the junior college type. The last-named institution is the only one in the State that advertises as a junior college.

WISCONSIN.

The State normal schools of Wisconsin are authorized to give a two-year college course, for which the State university allows two years' credit. Five normal schools are at present offering such a course; namely, Eau Claire, La Crosse, Milwaukee, Oshkosh, and Superior.

No very pronounced attempt has been made in this State to organize junior colleges.

NORTH CENTRAL ASSOCIATION OF SCHOOLS AND COLLEGES.

The following standards for the accrediting of junior colleges were agreed upon at the 1917 meeting of the North Central Association of Colleges and Secondary Schools:

A standard junior college is an institution with a curriculum covering two years of collegiate work (at least 60 semester hours, or the equivalent in year, or term, or quarter credits) which is based upon and continues or supplements the work of secondary instruction as given in an accredited four-year high school. A semester hour is defined as one period of classroom work in lecture or recitation extending through not less than 50 minutes net or their equivalent per week for a period of 18 weeks, two periods of laboratory work being counted as the equivalent of one hour of lecture or recitation.

1. The minimum scholastic requirements of all teachers of classes in the junior college shall be graduation from a college belonging to this association, or an equivalent, and in addition graduate work in a university of recognized standing amounting to one year.

2. The junior college shall require for registration as a junior college student the completion by the student of at least 14 units of high-school work as defined by this association.

3. The work of the junior college must be organized on a collegiate as distinguished from a high-school basis.

4. The teaching schedule of instructors teaching junior college classes shall be limited to 22 hours per week; for instructors devoting their whole time to junior college classes 18 hours shall be a maximum; 15 hours is recommended as the maximum.

5. The limit of the number of students in a recitation or laboratory class in a junior college shall be 30.

6. Students registered in a junior college who are permitted to enroll in regular high-school classes shall not be given full junior-college credit for such work, and in no case shall the credit thus given exceed two-thirds of the usual high-school credit. No junior college will be accredited unless it has a registration of 25 students if it offers but a single year, and 50 students if it offers more than a single year.

7. The junior college shall have library and laboratory facilities sufficient to carry on its work the same as it would be carried on the first two years of an accredited standard college.

8. No junior college will be accredited by this association when maintained in connection with a high school or secondary school unless such school is also accredited by this association.

BOARD OF EDUCATION OF THE METHODIST EPISCOPAL CHURCH SOUTH.

The following definition of a junior college is published in the sixth report of the Commission of Education of the Methodist Episcopal Church South:

> The junior college is an institution offering two years' work of college grade, or at least 30 college hours beyond the regular four years of secondary or high-school training, but not equipped for a four-year college course leading to the bachelor's degree.
>
> To be classed as a junior college, an institution, in addition to the entrance requirements named on page 25, must meet the following conditions:
>
> 1. A faculty of not less than six competent teachers, having at least a bachelor's degree, exclusive of teachers of art, music, expression, or household arts and sciences.
> 2. A library of 1,000 bound volumes selected with reference to college uses and exclusive of Government publications.
> 3. A laboratory equipment worth at least $1,000, unless the college is exclusively a classical institution.
> 4. The academy or preparatory department to be a standard secondary school, whose graduate is admitted without examination to the freshman class of the standard college.
> 5. In the two college years the institution is to do the work usually done in the freshman and sophomore years of the standard college (see p. 26), so that the junior college graduates may enter without prejudice the junior year of the standard college. Each institution should conform as nearly as possible its course of study to the requirements for the freshman and sophomore years of the college with which it is most closely affiliated.
> 6. The standard college is to grant 30 hours' college credit or full junior standing, and no more, to the graduate of the junior college.
> 7. The junior college shall not confer any bachelor's degree.

In May, 1917, this board published the following official list of junior colleges:

Alexander Collegiate Institute, Jacksonville, Tex.
Andrew College, Cuthbert, Ga.
Blackstone College for Girls, Blackstone, Va.
Central College for Women, Lexington, Mo.
Clarendon College, Clarendon, Tex.
Davenport College, Lenoir, N. C.
Hiwassee College, Sweetwater, Tenn.
Howard-Payne College, Fayette, Mo.
Logan College, Russellville, Ky.
Louisburg College, Louisburg, N. C.
Mansfield College, Mansfield, La.
Martin College, Pulaski, Tenn.
Marvin College, Fredericktown, Mo.
Memphis Conference Female Institute, Jackson, Tenn.
Meridian College, Meridian, Tex.
Morris Harvey College, Barboursville, W. Va.
North Texas College, Sherman, Tex.
San Antonio College, San Antonio, Tex.
Scarritt-Morrisville College, Morrisville, Mo.
South Georgia College, McRae, Ga.
Stamford College, Stamford, Tex.
Weaver College, Weaverville, N. C.
Wesley College, Greenville, Tex.
Young L. G. Harris College, Young Harris, Ga.

ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS OF THE SOUTHERN STATES.

The condition upon which junior colleges may become members of the Association of Colleges and Secondary Schools of the Southern States are as follows:

1. The college work must be the essential part of the curriculum of any institution recognized as a junior college; therefore junior colleges must publish in their annual catalogues a classified list of all their students.

2. If a preparatory department is maintained, its work must be approved by the association.

3. The minimum requirements for admission to the college classes must correspond with the present requirements of this association.

4. For graduation from the junior college the student must complete satisfactorily 30 year, or 60 semester, hours of work equivalent to that given in the freshman and sophomore years of colleges belonging to this association.

5. No junior college shall confer a degree; a junior college diploma may be awarded.

6. The number of teachers, their training, the amount of work assigned them, the number of college students, the resources and equipment of the junior college are vital factors in fixing the standard of an institution and must be considered by the executive committee in recommending any institution for membership. On these points, therefore, the executive committee shall issue recommendations from time to time for the purpose of informing institutions seeking membership in the association concerning conditions to be met.

A SUMMARY OF THE PRESENT STANDARDS FOR THE ACCREDITING OF JUNIOR COLLEGES.

None of the above regulations, so far as we are aware, make the claim of being complete and final. For the most part they represent the first attempt of the kind that has been made by each of these particular accrediting agencies. They have been based upon standards which have proven more or less successful when applied to other institutions and not upon a thorough knowledge of what the junior college should attempt to accomplish. Many times, also, they have been arranged with reference to more or less local conditions, or, on the other hand, some are so vague and general as to be of little value to the practical administrator. For these reasons it has been thought wise to bring together from all such attempts those points upon which there is more or less of an agreement, with the occasional addition of certain other regulations, which, though mentioned but once or twice, seem to be especially desirable. According to this plan the following composite picture of a standard junior college is arrived at.

A STANDARD JUNIOR COLLEGE.

1. *Establishment.*—According to the school law of the State of California "any high-school district having an assessed valuation of $3,000,000 or more" may establish a junior college or prescribe junior-college courses of study. Under this law the junior college becomes a part of the public-school system of that State, and the students enrolled in such courses are counted in figuring the amount of State aid which that school should receive, $15 per student.

Act 148 of the Michigan State Legislature provides that the board of education of any school district of the State having a population of more than 30,000 people is authorized and empowered to offer advanced courses to high-school graduates, such course not to embrace more than two years of collegiate work.

No legal provision has been made for the establishment of a private junior college, but such have been recognized in several of the States.

2. *General standards.*—The following statements may be taken as typical of the general specifications that have been laid down relative to standard junior colleges:

The University of Kansas senate provides that "a junior college must do its work after the manner of a college and must adopt the aims and ideals of a college. This means that the work of the junior college shall be far different from the work of a postgraduate course in a high school or academy."

The regulation of the Kansas State Board of Education states emphatically that "*Instruction in the junior college must be of college rank.*"

The State Department of Education of Texas states that "the character of the curriculum, efficiency of instruction, scientific spirit, and the standard of work shall be factors in determining the standing of the institution."

3. *Material equipment.*—(1) Means of support: The University of California has published the following significant statement, based upon a number of years of experience with junior colleges: "The burden of establishing a junior college should not be undertaken by a community which lacks either abundant financial resources or unity of interest in higher education. Any plan to establish a junior college without involving the community in an expense beyond that of the high school is an attempt to do the impossible."

The regulations of the University of Kansas senate state that "it is to be noted that the maintainance of a junior college will involve an expenditure greatly in excess of the expenses of an ordinary high school. Before organizing a junior college the community should carefully consider its financial ability to maintain such an institution without impairing the character of the work in the elementary and secondary schools."

The regulations of the Texas State Department of Education state that the financial support must be sufficient to meet the expenses of the institution.

(2) Buildings: The University of Kansas senate provides that either a "separate building or suitable rooms in the high-school building shall be reserved for the exclusive or principal use of the college classes; they must provide suitable accommodations in respect to capacity, convenience, efficiency, health, and tasteful appearance."

The Texas standards provide that "the location and construction of the buildings, the lighting, heating and ventilation of the rooms, the nature of the laboratories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both students and teachers."

(3) Libraries: There is complete agreement in emphasizing the fact that the library of the junior college must be chosen with reference to and be adequate for college work. This means that there must be furnished a good supply of books in addition to the regular high-school library. The number of volumes that should be provided varies in the different regulations from one to five thousand, exclusive of public documents. The general consensus of opinion is that there should be at least 2,000 volumes selected with special reference to college work.

Other suggestions seem reasonable: The library should be equipped with a complete card catalogue and be in charge of a trained librarian. There should be an annual appropriation of from $15 to $75 for each subject taught, according to its nature, and finally there should be provided a reasonable supply of carefully selected periodicals.

(4) Laboratories: It is agreed also that the laboratories should be adequate and available for strictly college work. This means that they should be sufficiently

large and well equipped to provide the opportunity for the student to perform individually all experiments outlined for all such courses in colleges.

Estimates as to the cost of such an equipment vary with the subjects to be taught. Those for physics range from $1,000 to $2,000, for chemistry from $500 to $1,500, for biology from $500 to $1,500, and for agriculture, botany, and zoology about $500 each. The University of California suggests that an addition to the high-school equipment of from $1,500 to $3,000 for each science taught is necessary.

4. *Administration of the curriculum.*—(1) Scope of the work: It is quite generally agreed that the junior college should not attempt to offer more than the first two years of the standard course above and beyond the standard four-year high-school course. Provision is sometimes made, however, for additional course of a vocational nature.

(2) Departments of instruction: Practically all of the standards agree that there should be at least five departments of instruction. The following are the ones most frequently named: English, history, mathematics, foreign languages, and science.

(3) Requirements for admission: The present consensus of opinion is that the requirements for admission to the junior college should be the same as those for admission to the standard college or university as prescribed by the various accrediting agencies throughout the country. There is practically unanimous agreement that students should not be admitted to junior college until they have completed not less than 14 or 15 secondary units, as such are generally defined at present. The only exception to this rule that has been found is the regulation of the University of Illinois whereby seniors ranking in the upper one-third of their class are permitted to enroll in junior college courses. This regulation has, however, been severely criticized in a report of a special committee appointed by that institution to investigate the junior college situation.

(4) Requirements for graduation: The standards in regard to requirements for graduation are fairly uniform. It is agreed that such should include the completion of the first two years of a standard college course with 60 to 64 semester hours of credit, A period of at least one or two years in each of the five departments mentioned above is usually required. For example, the Kansas State Board of Education requires three-quarters of two years in history and English and one or two years in foreign language and science. The requirements of the University of Missouri are: Six hours of English, five hours of history, ten hours of one foreign language, three hours of mathematics or logic, five hours of physical science, and five hours of biological science. By an hour is meant a 60-minute period of class work, or a 120-minute period of laboratory work, each week for one semester.

(5) Recitation periods: The requirement that the recitation period should be 60 and the laboratory period 120 minutes in length is generally accepted.

5. *Faculty.*—(1) Number: There should be at least five heads of departments devoting all or nearly all of their time to college work. This means that there should be at least one specially prepared person for each of the five departments of instruction above mentioned.

(2) Training: All agree that an instructor in a junior college should have at least a bachelor's degree from a standard college or university. All except one of the accrediting agencies specify at least one year of graduate work in a standard university in the subject to be taught. By many the master's degree is thought to be an essential requirement. In this connection it will be worth while to quote from the suggestions offered by the University of California to supplement the minimum requirements given above: "It is desirable that the junior college teacher should have had some experience in university instruction. And certainly he should not be inferior to the university instructor with reference to advanced scholarship. This means that he should have devoted two or three years to graduate study in a chosen

field, that he should be a specially trained expert, and should have done work equivalent to that usually required for a doctor's degree."

(3) Amount of teaching: All agree that the amount of teaching required of the junior college instructor should be limited. The amount permitted varies from 15 to 25 hours per week, with a majority favoring less than 20. Again we may quote the suggestions of the University of California as an excellent ideal. "He must have leisure for reading, reflection, and growth. The hours of instruction should be limited to not more than 12 or, at most, 15 per week, not because it is the business of the junior college to foster research, but because it is the business of the junior college to get the most out of its instructors, to give them opportunity for life and progress, to encourage them to preserve a scholarly attitude toward their work."

(4) Salary: The suggestions as to the salary of the junior college instructor vary from $1,200 to $2,400 a year. California points to the success of those junior colleges that have attempted to standardize their salaries at $1,800 to $1,900 a year. Wherever this subject is mentioned, it is emphasized that an adequate salary is absolutely essential to proper instruction.

6. *Students.*—(1) Enrollment: The University of Illinois requires that there should be at least 50 students enrolled in junior college courses.

The Kansas State Board of Education states that "no junior college shall be organized with fewer than 15 students in the first year or 25 students in the first and second years of the college course. When the attendance in the college shall fall below 10 students in the first year or 15 students in the first and second years for a period of nine weeks, such school shall cease to be accredited for college work."

(2) Size of classes: It is thought desirable that classes be limited to 30 for recitation purposes.

(3) Separation of classes: The Kansas State Board of Education provides that there shall be, with very few exceptions, a distinct separation between high-school and college classes. "In no case shall students be grouped together if there is a difference of more than one year in their classification, and if any college student is enrolled in a high-school class the semester hours of college credit allowed shall not be more than one-half the number of recitation hours in any semester."

Although this requirement is seldom mentioned, it may be inferred that it is for the most part complied with in the strict interpretation of the requirement that only high-school graduates shall be permitted to enroll in junior college courses.

(4) Amount of work: The student should not be allowed to do more than 15 or 16 hours of class work per week, two hours of laboratory work counting the same as one hour of recitation.

7. *The academy or preparatory school.*—The requirement of the North Central Association of Schools and Colleges states that "no junior college will be accredited by this association when maintained in connection with a high school or secondary school unless such school is also accredited by this association."

Similarly the State Department of Education of Texas states that "if a preparatory school is maintained in connection with the institution, its work must correspond, in so far as it extends, to that of a standard high school, and must be approved by the State Department of Education."

8. *Inspection.*—Provision is usually made by each accrediting agency for a special committee whose duty it is to frequently inspect the work of the junior colleges under its jurisdiction. The report of this committee serves as a basis for the continued accrediting of each institution.

9. *Limitations.*—(1) No junior college shall confer a baccalaureate degree but may award a junior diploma.

(2) The word "junior" should be prefixed by an institution when applying to itself the term "college."

Chapter VI.

SUMMARY AND CONCLUSION.

The purpose of this investigation was stated in Chapter I, as follows:

1. To make a clear analysis of the forces that have contributed to the origin and development of the junior college.

2. To ascertain the facts in regard to the present status of the various types of junior colleges throughout the United States.

3. To make a summary of the present attempts at the accrediting of junior colleges in the various States.

4. To suggest the possible applications of this information to the problems peculiar to the organization and administration of the junior college.

The conclusions reached may be summarized as follows:

I. Conclusions in regard to the forces that have contributed to the origin and development of the junior college.

1. The idea of a junior college in the form of an extended period of secondary education probably comes from Europe. In its present form, however, the junior college is purely an American product.

2. The University of Michigan was the first institution in this country to recognize officially the junior college idea. This was in 1883. It remained for President Harper, of the University of Chicago, and Dean Lange, of the University of California, to work out almost simultaneously a detailed plan for the organization of junior colleges as a part of our educational system. Since 1892 these institutions have strongly advocated the junior college.

3. Universities have supported the junior college because—

(*a*) The very rapid increase in their enrollment has made it difficult to provide for the needs of the freshman and sophomore classes.

(*b*) The need of early preparation for professional courses has made it necessary to classify entering students on the basis of their future work.

(*c*) There is a growing conviction on the part of leading educators that there is need of a redistribution of work between the secondary school and the university.

4. The recent tendency of normal schools to become colleges or at least to offer college work has given an impetus to the junior college movement:

(*a*) Normal school officials claim that they must keep pace with the progress of the public school system by providing collegiate training for prospective teachers.

(*b*) The recent movement toward standardization of all educational institutions has resulted in the belief that a majority of normal schools had best limit the amount of collegiate instruction offered to two years.

5. Public high schools in a number of cities have been led to extend their course to include the first two years of the college course for the following reasons:

(*a*) There is a widespread demand upon the part of an intelligent public to have the opportunities for securing a higher education brought within reach of all.

(*b*) There is need of certain vocational and completing courses for the large numbers of students who can not or should not go to the university.

(*c*) Specific local needs in certain cities have resulted in the establishment of junior colleges.

(*d*) The tendency to raise the entrance requirements of professional schools to include the first two years of college work.

(*e*) The geographical remoteness of some cities from standard colleges and universities.

(*f*) The fact that a local college is a financial saving to a community.

6. An increasing number of small denominational colleges have become junior colleges. Various factors have contributed to this change:

(*a*) With the progress of the standardization movement it has become more and more difficult for the college of limited means to offer more than two years of college work.

(*b*) Churches have awakened to the folly and danger of establishing in each State a large number of colleges, all endeavoring to cover the same kind and amount of work. The junior college plan will eliminate competition in a large measure and make possible a closely knit together system of church schools.

(*c*) Officials of small colleges are desirous of having their respective schools become honest institutions by claiming to do only that which they can do well.

(*d*) The junior college assures a place in our educational system for the large number of colleges for women in the South.

(*e*) In some sections of the country the junior college has been encouraged as a means of providing additional opportunities for teacher training.

II. Conclusions in regard to the present status of the various types of junior colleges.

1. The junior college movement has made rapid growth during the past 10 years. Sixty-nine junior colleges have been organized since 1907, and more than half of this number since 1915.

2. There may be distinguished four types of junior colleges:

(*a*) The "junior college" or "lower division" of the college of liberal arts of the university. This organization is found at present in the Universities of Chicago, California, and Washington.

(*b*) Normal schools accredited for two years of college work. Such institutions have been officially recognized in the following States: Arizona, Indiana, Michigan, Minnesota, North Dakota, Nebraska, Oklahoma, Utah, West Virginia, and Wisconsin.

(*c*) The public high school extended to include the first two years of college work. The names of 39 such institutions have been reported. Of this number, 21 are in California.

(*d*) The small private college which has limited its work to two years. The names of 93 such colleges have been reported. Of this number, 16 are in Texas, 14 in Missouri, 9 in Virginia, and 6 in Illinois.

3. The following facts have been collected in regard to the sources of support of the last two types of junior colleges:

(*a*) The sources of support of the public junior colleges named in order of importance are: Taxation, State aid, and tuition. There is an increasing tendency to regard these institutions as an integral part of the system of public education and hence as objects of public support.

(*b*) The sources of support of private junior colleges named in order of importance are: Tuition, church budget, endowment, and offerings and donations. Fully 75 per cent of the income of these institutions comes from sources which can not be counted as fixed and assured. Less than 20 per cent comes from a permanent endowment.

4. The following facts concerning the courses of study offered in the public and private junior colleges are of interest:

(*a*) The traditional freshman and sophomore courses occupy the bulk of the curriculum of both types of institutions.

(*b*) Private junior colleges adhere more closely to the classical courses than do the public institutions.

(*c*) Public junior colleges are offering more and a greater variety of vocational or finishing courses than the private institutions. Of the work offered by the former, 17 per cent may be considered vocational, as compared with only 9 per cent of that offered by the latter. If the courses in education are omitted, the latter would be reduced to 4.5 per cent.

(*d*) Sixty per cent of the private junior colleges reporting offer courses in education, as compared with only 16 per cent of the public colleges.

5. A careful study of the training, experience, and work of the instructors of the public and private junior colleges yields the following significant facts:

(*a*) Measured by the academic degrees which they have secured and by the amount of graduate work which they have completed, the training of the instructors of the junior college studied is greatly inferior to the standard maintained by certain colleges and universities. It is also inferior to the standards at present agreed upon as desirable for the junior colleges themselves.

(*b*) The instructors in junior colleges have had less teaching experience than the instructors of freshman and sophomore classes in certain standard colleges and universities.

(*c*) Instructors in junior colleges are required to carry a heavier schedule than are the instructors in certain standard colleges and universities. The number of hours devoted exclusively to freshman and sophomore classes is, however, approximately the same in all classes of institutions considered in this investigation.

(*d*) The enrollment in the recitation sections in the junior colleges is much less on an average than is that of the first and second year classes in the standard colleges and universities considered.

6. The following facts in regard to the enrollment of public and private junior colleges are significant:

(*a*) Each of the 74 junior colleges considered in this investigation is operated in connection with an academy or a high school.

(*b*) The high-school departments of the public junior colleges have an average enrollment of 580 students.

(*c*) The academies operated in connection with the private junior colleges have an average enrollment of only 80 students.

(*d*) The enrollment in the private junior colleges increased from 1,771 in 1915 to 2,372 in 1917, or 34 per cent.

(*e*) The enrollment in public junior colleges increased from 592 to 1,587, or 168 per cent, during the same period.

7. The following facts in regard to the graduates of junior colleges are especially significant:

(*a*) A majority of the junior colleges grant no degree. A small per cent grant the degree or title of "Associate in Arts."

(*b*) The number of graduates from public junior colleges increased 211 per cent from 1915 to 1917.

(*c*) During the same period the number of graduates of private junior colleges increased 21 per cent.

(*d*) Of the 370 graduates of the public junior colleges for this period of three years, 73 per cent continued their work in a higher institution.

(*e*) Of the 2,225 graduating from the private junior colleges during this period, 41 per cent continued their work in higher institutions.

III. *Conclusions in regard to the various attempts to standardize the junior college.*

1. The junior college has been recognized officially, at least in specific cases, by the following institutions: The State Universities of Arkansas, California, Idaho, Indiana, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Texas, and Washington, together with Leland Stanford University.

2. The State legislatures of the following States have enacted legislation bearing to a greater or less extent on the junior college movement: California, Idaho, Michigan, Texas, and Wisconsin.

3. The State departments of education, also, of the following States have recognized the junior college: California, Illinois, Kansas, Texas, Utah, Virginia, and West Virginia.

4. In addition to the above the following accrediting agencies have attempted to establish desirable standards for junior colleges: The Kentucky Association of Colleges and Universities, the college section of the State Teachers' Association of Texas, the North Central Association of Schools and Colleges, the board of education of the Methodist Episcopal Church South, and the Association of Colleges and Secondary Schools of the Southern States.

5. The standards that have been established by these various accrediting agencies approximate uniformity on the following points:

(*a*) The material equipment necessary for college grade work.

(*b*) The scope of the work that should be attempted and the requirements for admission and graduation.

(*c*) The training to be expected of each instructor and the amount of teaching to be required.

(*d*) The amount of work that a student should be permitted to carry.

(*e*) The relation of the junior college to the high school or academy with which it is connected.

(*f*) The general standard that instruction in the junior college must be of college rank.

IV. *Conclusion in regard to the possible applications of these facts to the problems of the junior college.*

1. From the study of the origin and development of the junior college we may conclude that it has appeared in response to certain fundamental needs, and hence that for the present at least it seems assured of a place in our system of education.

2. From the study of the present status of the junior college we may conclude:

(*a*) That if the junior colleges are to justify their attempt to offer the first two years of standard college work they must secure better-trained faculties. Fully 50 per cent of the junior colleges studied need to raise their standards in this respect.

(*b*) That at present the junior colleges, especially the private institutions, do not meet the needs of the comparatively large proportion of their students who do not intend to enter the university upon graduation. These institutions should offer more and a greater variety of vocational or finishing courses of college grade.

(*c*) That public junior colleges should encourage the movement which seeks to make them a definite part of the State system of public education.

(*d*) That private junior colleges should seek to cooperate with each other and with the State universities in their respective States to the end that a better organized and more economical system of higher education may be established.

(*e*) That private junior colleges should endeavor to secure permanent endowment of at least $100,000 for each institution, and they should at all times limit the amount of work which they attempt to offer to that which can be conducted with a maximum efficiency.

3. From the study of the various attempts to standardize the junior college we may conclude that the following minimum standards should be met by any institution attempting to offer the first two years of college work:

(*a*) Requirement for admission—Graduation from an accredited high school or at least 15 units of credit in standard secondary school work.

(*b*) Requirement for graduation—At least 60 semester hours of college credit in advance of the 15 units of secondary work.

(*c*) Equipment—(1) Library—At least 2,000 volumes carefully selected with special reference to college work. (2) Laboratories—An equipment valued at least at $1,000 to $1,500 for each science taught.

(*d*) Teachers—(1) Number—At least five heads of departments. (2) Training—At least one year of graduate work in advance of the bachelor's degree, with special training in the subject to be taught. (3) Amount of teaching—No more than 20 periods per week (60-minute periods). (4) Character of instruction—Must in all cases be strictly of college grade.

(*e*) The high school or academy operated in connection with the junior college must be fully accredited.

(*f*) Limitations—(1) The institution must prefix the term "junior" when applying to itself the name "college." (2) No junior college should confer a baccalaureate degree.

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Appendix A.—QUESTIONNAIRE TO JUNIOR COLLEGES, WITH LIST OF INSTITUTIONS.

Department of the Interior,
Bureau of Education,
Washington.

Dear Sir: The increase in the number of junior colleges during the past five years and the very great significance of this type of institution to the future of American higher education make it important that a record of the present state of the junior-college movement be had. The Bureau of Education has requested Mr. F. M. McDowell, of the State University of Iowa, to study and report on the junior college. To facilitate this study I take the liberty of sending you the inclosed list of questions, with the request that you answer them as carefully as possible and return your reply to this office at your earliest convenience. Please send also a copy of your latest catalogue or course of study.

Yours, sincerely,

P. P. Claxton,
Commissioner.

JUNIOR COLLEGES.

Name of Institution ....; location ....;

1. Kind of institution: Public..........; private..........; for men..........; for women..............; coeducational...........

Approximate amount received from each.

2. Sources of support:
   State aid.. $
   Taxation..
   Tuition..
   Endowment..
   Church budget..
   Offerings and donations..
   Miscellaneous..

3. When did your institution become a junior college? Year.........., Mo..........; or when was a junior-college department established at your institution? Year.........., Mo..........
4. When was your institution accredited as qualified to give work of a standard college grade? Year.........., Mo..........
5. By what organization was it so accredited?..
6. What credit (in semester hours) do your graduates receive at the State university of your State? ....semester hours.
7. How many semester hours of credit are required for graduation from your junior college?...............
8. Does your institution grant a degree? .... If so, what? ....
9. Number graduated from your junior college in 1915 ....; 1916 ....; 1917 ....
10. Number who have continued their college work in a higher institution of students graduated in 1915 ....; 1916 ....; 1917 ....

11. Enrollment for the past three years:

	1914-15	1915-16	1916-17
In high school or academy			
College freshmen			
College sophomores			

NOTE.—By "college freshman" is meant a student who has presented at least 14 units of high-school credits for entrance and has less than 30 semester hours of credit in college. A sophomore is one who has more than 30 and less than 60 hours of college credit.

12. How many classes or recitation sections are offered in your junior college?

Number of these which have enrolled—

Less than 5 students..........
From 5 to 9 students..........
From 10 to 14 students..........
From 15 to 19 students..........
From 20 to 24 students..........
From 25 to 29 students..........
More than 30 students..........
More than 50 students..........

13. What were your reasons for organizing a junior college?

(Check the controlling reasons and underscore those that were especially important.)

Geographical remoteness from a standard college or university.
Financial difficulty in maintaining a four-year course.
Desire of parents to keep children at home.
Desire of students for college work near home.
Desire to secure segregation of the sexes.
To provide opportunities for higher education under church control.
To provide vocational training more advanced than high-school work.
To provide additional opportunities for teacher training.
To meet the entrance requirements of professional schools.
To provide a completion school for those who can not go further.
To meet specific local needs.

NOTE: The above suggestions were offered in the hope of making it easier to answer this question. An extended discussion of your reasons will be greatly appreciated. Use the space below or append another sheet.

14. *Will you kindly furnish the following information concerning each instructor in your junior college?*

Instructors.	Degrees: When and where received?	Number of semesters[1] of graduate work in advance of the standard A. B. degree?	Subjects taught? (Abbreviate as follows: Alg., Geom., Trig., Rhet., Am. Hist., Eur. Hist., Ger., Fr., etc.	Number of years taught up to the present year?	Number of recitation periods taught per week during present year?	Number of these periods in the junior college?	Length of periods?
Instructor A							
Instructor B							
Instructor C							
Instructor D							
Instructor E							
Instructor F							
Instructor G							

[1] Summer session of six weeks counts one-half semester.

JUNIOR COLLEGES IN UNITED STATES TO WHICH QUESTIONNAIRES WERE SENT.

California:
- Fresno Junior College, Fresno.
- Imperial Junior College, Imperial.
- Bakersfield Junior College, Bakersfield.
- Azusa Junior College, Azusa.
- Long Beach Junior College, Long Beach.
- Hollywood Junior College, Los Angeles.
- Los Angeles City Junior College, Los Angeles.
- San Fernando Junior College, San Fernando.
- Pasadena Junior College, Pasadena.
- Fullerton Junior College, Fullerton.
- Orange Junior College, Orange.
- Santa Ana Junior College, Santa Ana.
- Auburn Junior College, Auburn.
- San Diego Junior College, San Diego.
- Santa Barbara Junior College, Santa Barbara.
- Yreka Junior College, Yreka.
- Pomona Junior College, Pomona.
- Riverside Junior College, Riverside.
- Sacramento Junior College, Sacramento.
- Palo Alto Junior College, Palo Alto.

Georgia:
- Andrew College, Cuthbert.
- South Georgia College, McRae.
- Young L. G. Harris College, Young Harris.

Illinois:
- Blackburn College, Carlinville.
- Bradley Polytechnic Institute, Peoria.
- Ferry Hall, Lake Forest.
- Joliet Junior College, Joliet.
- Frances Shimer School, Mount Carroll.
- Lane Junior College, Chicago.
- Lewis Institute, Chicago.
- Loyola University, Chicago.
- Monticello Seminary, Godfrey.
- Senn Junior College, Chicago.

Indiana:
- Goshen Junior College, Goshen.

Iowa:
- Graceland College, Lamoni.

Kentucky:
- Hamilton College, Lexington.
- Logan College, Russellville.
- Kentucky College for Women, Danville.
- Margaret College, Versailles.
- Millersburg College, Millersburg.

Louisiana:
- Mansfield College, Mansfield.

Michigan:
- Grand Rapids Junior College, Grand Rapids.
- Detroit Junior College, Detroit.
- Martindale Normal School, Detroit.

Minnesota:
- Cloquet High School, Cloquet.
- Rochester High School, Rochester.

Minnesota—Continued.
- Stanley College, Minneapolis.
- Hibbing High School, Hibbing.
- Jackson High School, Jackson.
- Villa St. Scholastica, Duluth.

Mississippi:
- All Saints College, Vicksburg.
- Mississippi Synodical College, Holly Springs.
- Hillman College, Clinton.

Missouri:
- Central College for Women, Lexington.
- Christian College, Columbia.
- Cottey College, Nevada.
- Hardin College, Mexico.
- Howard Payne College, Fayette.
- Kansas City Polytechnic Institute, Kansas City.
- Lindenwood College, St. Charles.
- Palmer College, Albany.
- Pritchett College, Albany.
- St. Joseph Junior College, St. Joseph.
- Stephens College, Columbia.
- Synodical College, Fulton.
- The Principia, St. Louis.
- William Woods College, Fulton.

Nebraska:
- York College, York.

North Carolina:
- Davenport College, Lenoir.
- Louisburg College, Louisburg.
- Weaver College, Weaverville.

Tennessee:
- Hiwassee College, Sweetwater.
- Martin College, Pulaski.
- Memphis Female College, Jackson.

Texas:
- Alexander Collegiate Institute, Jacksonville.
- Clarendon College, Clarendon.
- Meridian College, Meridian.
- North Texas College, Sherman.
- San Antonio College, San Antonio.
- Stamford College, Stamford.
- Wesley College, Greenville.
- Abilene Christian College, Abilene.
- Thorp Spring College, Thorp Spring.
- Fairmount College, Fairmount.

Virginia:
- Marion College, Marion.
- Mary Baldwin Seminary, Staunton.
- Southern College, Petersburg.
- Stonewall Jackson Institute, Abingdon.
- Virginia College, Roanoke.
- Virginia Intermont College, Bristol.

Washington:
- Everett High School, Everett.

ADDITIONAL LIST OF INSTITUTIONS TO WHICH JUNIOR COLLEGE QUESTIONNAIRES WERE SENT.

- Alabama:
  - Marion Institute, Marion.
- Arkansas:
  - Crescent College, Eureka Springs.
- California:
  - Miss Head's School, Berkeley.
  - Girls' Collegiate School, Los Angeles.
  - Polytechnic Junior College, Los Angeles.
  - Free Methodist Seminary, Los Angeles.
  - St. Patrick's Seminary, Menlo Park.
  - St. Anthony's College, Santa Barbara.
  - Santa Monica Junior College, Santa Monica.
  - Selma Junior College, Selma.
  - Westlake School for Girls, Westlake.
- Colorado:
  - St. Stephen's School, Colorado Springs.
- Connecticut:
  - St. Thomas Preparatory Seminary, Hartford.
  - Pomfret School, Pomfret Center.
  - Connecticut Literary Institute, Suffield.
  - Gilbert School, Winsted.
- District of Columbia (Washington):
  - Colonial School for Girls.
  - Columbia University School.
  - Fairmont Seminary.
  - Immaculate Seminary.
  - Miss Madeira's School.
- Florida:
  - Ruskin College, Ruskin.
- Georgia:
  - Lucy Cobb Institute, Athens.
- Idaho:
  - Idaho Technical Institute, Pocatello.
- Illinois:
  - Convent of the Sacred Heart, Lake Forest.
  - St. Mary's School, Knoxville.
  - St. Bede College, Peru.
- Indiana:
  - Manchester College, North Manchester.
  - Winona College, Winona.
  - St. Joseph's College, Collegeville.
  - Concordia College, Fort Wayne.
- Iowa:
  - Highland Park College, Des Moines.
  - Humboldt College, Humboldt.
- Kansas:
  - Oswego College, Oswego.
  - St. John's Lutheran College, Winfield.
- Kentucky:
  - Cumberland College, Williamsburg.
- Louisiana:
  - Straight University (Negro), New Orleans.
  - St. Joseph's Seminary, St. Benedict.
  - Centenary College, Shreveport.
- Maryland:
  - Boys' Latin School, Baltimore.
  - St. Charles College, Catonville.
  - St. Joseph's Academy, Emmitsburg.
  - St. James School, St. James School.
- Massachusetts:
  - Academy of Notre Dame, Boston.
  - Roxbury Latin School, Boston.
  - Groton School, Groton.
  - Mount Ida School for Girls, Newton.
  - House in the Pines, Norton.
  - St. Mark's School, Southboro.
- Michigan:
  - Emmanuel Missionary College, Berrien Springs.
- Minnesota:
  - Faribault High School, Faribault.
  - St. Mary's Hall, Faribault.
  - Park Region Luther College, Fergus Falls.
  - Concordia College, St. Paul.
- Mississippi:
  - Mississippi Synodical College, Holly Springs.
  - Belhaven Collegiate and Industrial Institute, Jackson.
- Missouri:
  - St. Paul's College, Concordia.
  - Grand River College, Gallatin.
  - Forest Park College, St. Louis.
  - Scarritt-Morrisville College, Morrisville.
  - Academy of the Sacred Heart, St. Charles.
  - The Principia, St. Louis.
  - George R. Smith College (Negro), Sedalia.
- Nebraska:
  - Evangelical Lutheran Teachers' Seminary Seward.
- New Jersey:
  - Centenary Collegiate Institute, Hackettstown.
  - Hoover School, Paterson.
- New York:
  - St. Agnes School, Albany.
  - Packer Collegiate Institute, Brooklyn.
  - Holy Angels Collegiate Institute, Buffalo.
  - Bennett School for Girls, Millbrook.
  - Comstock School, New York.
  - Glen Eden Seminary, Poughkeepsie.
  - Wagner Memorial Lutheran College, Rochester.
- North Carolina:
  - Littleton College, Littleton.
  - Chowan College, Murfreesboro.
- Ohio:
  - Urbana University School, Urbana.
- Oklahoma:
  - Oklahoma Holiness College, Bethany.
- Oregon:
  - Columbia Junior College, Milton.
- Pennsylvania:
  - Academy of the New Church, Bryn Athyn.
  - Beechwood School, Jenkintown.
  - St. Francis College, Loretto.
  - St. Mary's College, North East.
  - Academy of the Sacred Heart, Philadelphia.
  - Chestnut Hill Academy, Philadelphia.
  - Friends' Select School, Philadelphia.
  - Schuylkill Seminary, Reading.
  - St. Thomas College, Scranton.
- Rhode Island:
  - St. George's School, Newport.
- South Carolina:
  - Anderson College, Anderson.
  - Claflin University (Negro), Orangeburg.
- Tennessee:
  - Columbia Institute, Columbia.
  - Milligan College, Milligan.
  - Nashville College for Young Ladies, Nashville,
  - Ward-Belmont School, Nashville.
  - Ruskin Cave College, Ruskin.
  - Murphy College, Sevierville.
  - Laneville College, Trenton.

- Texas:
    - College of Marshall, Marshall.
    - Decatur Baptist College, Decatur.
    - John Tarleton College, Stephenville.
    - Midland College, Midland.
    - St. Mary's College, Dallas.
    - Texas Military College, Terrill.
    - Tillotson College (Negro), Austin.
    - Wesley College, Greenville.
    - Westminster College, Tehuacana.
    - Wiley University (Negro), Marshall.
    - Texas Presbyterian College, Milford.
    - San Antonio Female College, San Antonio.
    - Carr-Burdette College, Sherman.
- Vermont:
    - Derby Academy, Derby.
- Virginia:
    - Averett College, Danville.
    - Daleville College, Daleville.
- Virginia—Continued.
    - Episcopal High School, Alexandria.
    - McGuire's University School, Richmond.
    - Stuart Hall, Staunton.
    - Fort Loudoun Seminary, Winchester.
    - Sullins College, Bristol.
    - Virginia Union University (colored), Richmond.
- Washington:
    - Columbia Lutheran College, Everett.
    - Spokane College, Spokane.
    - Walla Walla College, College Place.
- West Virginia:
    - Salem College, Salem.
- Wisconsin:
    - Concordia College, Milwaukee.
    - St. Lawrence College, Mount Calvary.
    - St. Mary's College and Academy, Prairie du Chien.

Appendix B.—QUESTIONNAIRE TO STATE UNIVERSITIES.

SUBSTATION OF U. S. BUREAU OF EDUCATION,
UNIVERSITY OF IOWA,
Iowa City, Iowa.

With the approval of the Commissioner of Education, the substation of the Bureau of Education at the University of Iowa is undertaking a study of the present status of the junior college movement in the United States.

By junior college is meant any institution, public or private, which is offering one or two years of standard college work above a four-year high-school course. Will you kindly aid us by filling the following blank and returning it to us at your earliest convenience? Please use inclosed penalty envelope for reply.

Sincerely yours,

WM. F. RUSSELL,
Special Collaborator, Director of Substation.

1. Has your institution given official recognition to any so-called junior colleges in your State?..........
   (If so, will you kindly send us a copy of the terms and standards of accrediting junior colleges, with a list of such accredited junior colleges.)
2. Does your institution grant advanced credit to students who have taken postgraduate work in high schools?..........
3. If so, under what conditions?..........

Additional information regarding the junior college movement in your State will be appreciated.

....

.... (Signature and title) .... (Address)

Appendix C.—QUESTIONNAIRE TO STATE DEPARTMENTS OF EDUCATION.

SUBSTATION OF U. S. BUREAU OF EDUCATION,
UNIVERSITY OF IOWA,
Iowa City, Iowa.

DEAR SIR: With the approval of the Commissioner of Education, the substation of the Bureau of Education at the University of Iowa is undertaking a study of the present status of the junior college movement in the United States.

Will you please tell me what official action has been taken in your State with reference to "junior colleges," that is, institutions, public or private, which offer one or two years of standard college work above the four-year high-school course?

If you have "accredited" any such institutions, kindly send me a copy of the terms and standards of accrediting, and a list of institutions so accredited.

If any legislation has been enacted on this subject please send me two copies of each law.

I shall be glad to receive any additional information you can give me relating to the matter, and will appreciate your assistance. A return penalty envelope and mailing slips are inclosed for your reply.

Sincerely, yours,

WM. F. RUSSELL,
Special Collaborator, Director of Substation.

Appendix D.—QUESTIONNAIRE TO STATE UNIVERSITY OF IOWA.

STATE UNIVERSITY OF IOWA,
COLLEGE OF EDUCATION.

To the Members of the University Faculty:

Under the direction of the College of Education and with the approval and cooperation of the dean of the college of liberal arts, I am undertaking a study of the junior colleges in the United States.

It is desirable as a basis of comparison that data be secured regarding the preparation and training of those who instruct first and second year students in some of our standard colleges and universities. To this end will you kindly aid us by filling out the following blank and returning it to me at your earliest convenience?

Most respectfully yours,

F. M. MCDOWELL.

Name of instructor..

1. College or department..

2. Title: Professor.
    Associate Professor.
    Assistant Professor.
    Instructor.
    Assistant Instructor.
    (Check the title that applies in your case.)

3. Degrees..................... When and where received..........................

4. Number of semesters of graduate work..
    (Six weeks summer session equal to one-half semester.)

5. Number of years taught up to the present year ....
    Schedule first semester this academic year.......................................

1. Number of recitation periods per week ....

2. Length of periods ....

3. Number of these periods in classes in which freshmen and sophomore students are enrolled...........
    ....

4. Total enrollment in each recitation section taught ...., ..., ..., ...,
    ...., ...

5. How many of the recitation sections taught are composed entirely of freshmen and sophomore students?
    ....

Appendix E.—QUESTIONNAIRE TO ILLINOIS AND MINNESOTA UNIVERSITIES, AND COE, CORNELL, AND GRINNELL COLLEGES.

Substation of U. S. Bureau of Education,
University of Iowa,
Iowa City, Iowa.

To the Members of the Faculty:

With the approval of the Commissioner of Education, the substation of the Bureau of Education at the University of Iowa is undertaking a study of the present status of the junior college movement in the United States.

As a basis of comparison it is desirable that data be obtained regarding the preparation and training of those who instruct first and second year students in standard colleges and universities. To this end will you kindly answer the following questions and return this sheet to me at your earliest convenience? You may use the inclosed franked envelope for reply.

Sincerely, yours,

Wm. F. Russell,
Special Collaborator, Director of Substation.

1. Degrees received.................... When and where received ....
2. Number of semesters of graduate work which you have done..
   (Six weeks summer session equal to one-half semester.)
3. Number of years taught up to present year ....
4. Number of recitation periods taught per week during the present year.............................
5. Length of each period ....
6. Number of these periods per week devoted to classes in which freshmen and sophomores are enrolled
   ....
7. Total enrollment in each recitation section in which freshmen and sophomores are enrolled ....
   ....
8. Total number of freshmen and sophomores enrolled in each of these sections............................

....
(Signature and title.) (Address.)

Appendix F.—GRADUATE WORK OF MEMBERS OF THE FACULTIES.

Distribution of instructors according to number of semesters of graduate work.

Of 469 instructors of 60 junior colleges.		Of 59 instructors of freshman and sophomore classes of University of Iowa.	
Number of semesters:	Frequency.	Number of semesters:	Frequency.
0- 1.9	192	0- 1.9	2
2- 3.9	158	2- 3.9	7
4- 5.9	66	4- 5.9	11
6- 7.9	33	6- 7.9	17
8- 9.9	13	8- 9.9	16
12-13.9	5	10-11.9	5
		14-15.9	1
	469		59
1.2	First quartile.	5.0	First quartile.
2.5	Median.	7.1	Median.
4.1	Third quartile.	8.8	Third quartile.
1.7	Mean deviation.	1.8	Mean deviation.

Distribution of instructors according to number of semesters of graduate work—Contd.

Of 82 instructors of freshman and sophomore classes of University of Illinois.

Number of semesters:	Frequency.
0- 1.9	1
2- 3.9	13
4- 5.9	11
6- 7.9	33
8- 9.9	19
10-11.9	4
12-13.9	2
14-15.9	1
	82

5.1	First quartile.
7.0	Median.
8.4	Third quartile.
1.8	Mean deviation.

Of 57 instructors of freshman and sophomore classes of University of Minnesota.

Number of semesters:	Frequency
0- 1.9	1
2- 3.9	1
4- 5.9	9
6- 7.9	29
8- 9.9	11
10-11.9	6
	57

6.1	First quartile.
7.2	Median.
8.3	Third quartile.
1.3	Mean deviation.

Of 15 instructors of freshman and sophomore classes of Coe College.

Number of semesters:	Frequency.
0	1
1	1
2	2
3	1
4	2
5	1
6	4
7	1
8	1
	15

2.3	First quartile.
4.7	Median.
6.5	Third quartile.
2.2	Mean deviation.

Of 16 instructors of freshman and sophomore classes of Cornell College.

Number of semesters:	Frequency.
0	1
1	2
2	2
3	2
5	3
7	1
8	2
10	2
11	1
	16

2.5	First quartile.
5.3	Median.
8.5	Third quartile.
2.1	Mean deviation.

Of 26 instructors of freshman and sophomore classes of Grinnell College.

Number of semesters:	Frequency.
0- 2.9	4
3- 5.9	4
6- 8.9	12
9-11.9	4
12-14.9	2
	26

4.8	First quartile.
7.2	Median.
8.6	Third quartile.
2.3	Mean deviation.

Appendix G.—YEARS OF TEACHING EXPERIENCE.

Distribution of instructors according to number of years of teaching experience.

Of 516 instructors of 60 junior colleges.

Number of years:	Frequency.
0- 4	164
5- 9	188
10-14	87
15-19	50
20-24	47
25-29	24
30-34	9
35-39	5
40-44	2
	516

3.9	First quartile.
8.6	Median.
15.6	Third quartile.
4.9	Mean deviation.

Of 68 instructors of the University of Iowa.

Number of years:	Frequency.
0- 4	17
5- 9	13
10-14	16
15-19	13
20-24	4
25-29	2
30-34	3
	68

5.0	First quartile.
11.2	Median.
16.9	Third quartile.
6.4	Mean deviation.

Of 90 instructors of the University of Illinois.

Number of years:	Frequency.
0- 4	24
5- 9	31
10-14	17
15-19	7
20-24	4
25-29	5
30-34	2
	90

4.7	First quartile.
8.4	Median.
13.7	Third quartile.
5.6	Mean deviation.

Of 60 instructors of the University of Minnesota.

Number of years:	Frequency.
0- 4	12
5- 9	12
10-14	15
15-19	12
20-24	3
25-29	3
30-34	3
	60

6.2	First quartile.
12.0	Median.
17.5	Third quartile.
6.3	Mean deviation.

Of 16 instructors of Coe College.

Number of years:	Frequency.
2	1
3	2
6	1
9	2
10	1
12	1
16	1
18	1
19	2
20	1
25	1
26	1
27	1
	16

6.0	First quartile.
16.0	Median.
20.0	Third quartile.
7.5	Mean deviation.

Of 16 instructors of Cornell College.

Number of years:	Frequency.
4	2
5	2
6	1
10	2
13	1
15	1
16	1
18	1
20	2
24	1
26	1
40	1
	16

5.5	First quartile.
15.0	Median.
20.5	Third quartile.
7.5	Mean deviation.

Distribution of instructors according to number of years of teaching experience—Contd.

Of 26 instructors of Grinnell College.

Number of years:	Frequency.
0- 4	5
5- 9	6
10-14	7
15-19	1
20-24	6
25-29	1
	26

6.2	First quartile.
11.4	Median.
15.4	Third quartile.
6.3	Mean deviation.

Appendix H.—AMOUNT OF TEACHING REQUIRED PER WEEK.

Distribution of instructors according to total number of recitation periods (clock hours) teaching per week.

Of 522 instructors of 66 junior colleges.

Number of periods:	Frequency.
0- 4	25
5- 9	36
10-14	140
15-19	212
20-24	83
25-29	20
30-34	6
	522

12.4	First quartile.
16.4	Median.
19.5	Third quartile.
4.3	Mean deviation.

Of 518 instructors of 66 junior colleges.

Number of periods:	Frequency.
0- 4	26
5- 9	220
10-14	120
15-19	39
20-24	11
25-29	2
	518

5.0	First quartile.
8.0	Median.
12.7	Third quartile.
3.6	Mean deviation.

Of 65 instructors of freshman and sophomore classes of the University of Iowa.

Number of periods:	Frequency.
0- 4	7
5- 9	14
10-14	29
15-19	14
20-24	1
	65

8.3	First quartile.
12.0	Median.
14.7	Third quartile.
3.5	Mean deviation.

Of 60 instructors of freshman and sophomore classes of University of Iowa according to recitation periods devoted to teaching first and second year classes.

Number of periods:	Frequency.
0- 4	21
5- 9	16
10-14	17
15-19	6
20-24	0
	60

3.6	First quartile.
7.8	Median.
12.4	Third quartile.
4.2	Mean deviation.

Distribution of instructors according to total number of recitation periods (clock hours) teaching per week—Continued.

Of 88 instructors of University of Illinois.

Number of hours:	Frequency.
0- 4	4
5- 9	39
10-14	40
15-19	4
20-24	1
	88

7.3	First quartile.
10.1	Median.
12.9	Third quartile.
3.1	Mean deviation.

Of 86 instructors of University of Illinois according to recitation periods devoted to freshman and sophomore classes.

Number of hours:	Frequency.
0- 4	15
5- 9	46
10-14	23
15-19	12
20-24	0
	86

5.7	First quartile.
8.6	Median.
10.7	Third quartile.
2.8	Mean deviation.

Of 60 instructors of University of Minnesota.

Number of hours:	Frequency.
0- 4	2
5- 9	18
10-14	33
15-19	6
20-24	1
	60

8.6	First quartile.
11.5	Median.
13.8	Third quartile.
2.8	Mean deviation.

Of 58 instructors of University of Minnesota according to recitation periods devoted to freshman and sophomore classes.

Number of hours:	Frequency.
0- 4	11
5- 9	36
10-14	9
15-19	2
20-24	0
	58

5.4	First quartile.
7.5	Median.
9.5	Third quartile.
2.0	Mean deviation.

Of 16 instructors of Coe College.

Number of hours:	Frequency.
3	1
11	1
12	1
13	3
14	3
15	2
17	3
18	1
20	1
	16

13.3	First quartile.
14.6	Median.
17.3	Third quartile.
3.3	Mean deviation.

Of 16 instructors of Coe College according to recitation periods devoted to freshman and sophomore classes.

Number of hours:	Frequency.
3	3
5	1
6	2
7	2
9	1
10	1
11	1
12	2
13	1
15	1
16	1
	16

6.0	First quartile.
9.0	Median.
12.5	Third quartile.
4.0	Mean deviation.

Distribution of instructors according to total number of recitation periods (clock hours) teaching per week—Continued.

Of 16 instructors of Cornell College.

Number of hours:	Frequency.
9	1
11	2
12	2
13	2
14	1
15	2
16	2
17	1
18	1
21	1
24	1
	16

12.5	First quartile.
15.0	Median.
17.0	Third quartile.
2.7	Mean deviation.

Of 16 instructors of Cornell College according to recitation periods devoted to freshman and sophomore classes.

Number of hours:	Frequency.
2	1
6	6
8	3
9	1
12	2
16	3
	16

6.5	First quartile.
8.3	Median.
12.5	Third quartile.
2.3	Mean deviation.

Of 26 instructors of Grinnell College.

Number of hours:	Frequency.
0- 2.9	0
3- 5.9	0
6- 8.9	4
9-11.9	8
12-14.9	7
15-17.9	6
18-20.9	1
	26

9.9	First quartile.
12.4	Median.
15.2	Third quartile.
2.8	Mean deviation.

Of 26 instructors of Grinnell College according to recitation periods devoted to freshman and sophomore classes.

Number of hours:	Frequency
0- 2.9	0
3- 5.9	4
6- 8.9	8
9-11.9	9
12-14.9	2
15-17.9	3
	26

6.9	First quartile.
9.3	Median.
11.5	Third quartile.
2.8	Mean deviation.

Appendix I.—STUDENTS IN RECITATION SECTIONS.

Distribution of recitation sections according to number of students enrolled.

Of 1,648 recitation sections of 65 junior colleges.

Number of students:	Frequency.
0- 4	291
5- 9	244
10-14	300
15-19	251
20-24	202
25-29	134
30-49	116
50 plus	10
	1,648

6.6	First quartile.
13.1	Median.
21.0	Third quartile.
7.6	Mean deviation.

Of 168 recitation sections of freshman and sophomore classes of University of Iowa.

Number of students:	Frequency.
0- 4	2
5- 9	9
10-14	24
15-19	26
20-24	27
25-29	19
30-34	14
35-39	13
40-44	4
45-49	9
50-54	9
55-59	1
60-150	11
	168

16.3	First quartile.
23.4	Median.
37.0	Third quartile.
12.6	Mean deviation.

Of 144 recitation sections of freshman and sophomore classes of University of Illinois.

Number of students:	Frequency.
0- 4	0
5- 9	5
10-14	8
15-19	14
20-24	44
25-29	44
30-34	21
35-39	4
40-44	1
50-80	3
	144

21.1	First quartile.
25.1	Median.
29.2	Third quartile.
5.5	Mean deviation.

Of 119 recitation sections of freshman and sophomore classes of University of Minnesota.

Number of students:	Frequency.
0- 4	2
5- 9	7
10- 14	9
15- 19	16
20- 24	21
25- 29	22
30- 34	13
35- 39	8
40- 44	3
45- 49	1
50- 54	5
55-182	12
	119

18.3	First quartile.
26.0	Median.
34.7	Third quartile.
10.7	Mean deviation.

Distribution of recitation sections according to number of students enrolled—Continued.

Of 48 recitation sections of freshman and sophomore classes of Coe College.

Number of students:	Frequency.
0- 4	2
5- 9	7
10-14	7
15-19	9
20-24	4
25-29	4
30-34	5
35-39	6
40-44	3
50 plus	1
	48

12.1	First quartile.
19.4	Median.
33.0	Third quartile.
10.5	Mean deviation.

Of 33 recitation sections of freshman and sophomore students of Cornell College.

Number of students:	Frequency.
0- 4	5
5- 9	0
10-14	3
15-19	5
20-24	10
25-29	5
30-34	1
35-39	2
40-44	0
45-49	0
50 plus	2
	33

15.2	First quartile.
21.7	Median.
26.7	Third quartile.
8.6	Mean deviation.

Of 57 recitation sections of freshman and sophomore students of Grinnell College.

Number of students:	Frequency.
0- 4	2
5- 9	7
10-14	5
15-19	3
20-24	9
25-29	10
30-34	6
35-39	3
40-44	3
45-49	2
50-54	2
55-59	2
60 plus	3
	57

15.4	First quartile.
26.2	Median.
36.2	Third quartile.
12.3	Mean deviation.

Appendix J.—REASONS FOR ORGANIZING JUNIOR COLLEGES.

Table showing reasons for organizing junior colleges.[1]

Location.	Institution.	Kind.	Control.	Geographical.	Financial.	Desire of parents.	Desire of students.	Segregation of sexes.	Religious.	Vocational.	Teacher training.	Professional.	Completion school.	Local needs.
ARKANSAS.														
Eureka Springs	Crescent College	Women	Private		×								×	
CALIFORNIA.														
Azusa	Citrus Union	Coeducation.	Public	×		×	×						×	×
Bakersfield	Kern County Union	do	do	×		×	×				×		×	
East Auburn	Placer Junior College	do	do	×		×	×						×	
Fresno	Fresno Junior College	do	do	×		×	×						×	
Fullerton	Fullerton Junior College	do	do	×		×	×					×	×	×
Hollywood	Hollywood Junior College	do	do			×	×							
Imperial	Imperial Junior College	do	do											
Long Beach	Long Beach Junior College	do	do											
Los Angeles	Girls Col. School	Women	Private											
Do	Los Angeles Junior College	Coeducation.	Public			×	×						×	
Do	Los Angeles Seminary	Women	Private			×	×		×					×
Do	Westlake	do	do			×			×					×
Pomona	Pomona Junior College	Coeducation.	Public							×			×	×
Riverside	Riverside Junior College	do	do		×	×						×	×	×
Sacramento	Sacramento Junior College	do	do			×							×	
San Diego	San Diego Junior College	do	do											
Santa Barbara	Santa Barbara Junior College	do	do											
DISTRICT OF COLUMBIA.														
Washington	Miss Madeira's School	Women	Private		×								×	
GEORGIA.														
Cuthbert	Andrew College	Women	Private		×			×	×	×	×		×	
MacRae	South Georgia College	do	do											
Young Harris	Young L. G. Harris	Coeducation.	do		×				×				×	×
IDAHO.														
Pocatello	Idaho State Academy													

IOWA.														
Lamoni	Graceland College	Coeducation.	Private		×	×	×		×		×	×		
Osage	Cedar Valley Seminary													
ILLINOIS.														
Carlinville	Blackburn College	Coeducation.	Private											
Chicago	Lane Junior College	Men	Public		×	×	×	×	×			×	×	×
Do	Lewis Institute	Coeducation.	Private				×			×	×	×	×	×
Godfrey	Monticello Seminary	Women	do				×						×	
Joliet	Joliet Junior College	Coeducation.	Public											
Lake Forest	Ferry Hall	Women	Private				×	×					×	
Mount Carroll	Francis Shimer School	do	do											
Peoria	Bradley Polytechnic Institute	Coeducation.	do	×		×	×			×	×	×		×
INDIANA.														
Collegeville	St. Joseph College	Men	Private						×					
Fort Wayne	Concordia College	do	do									×		
KENTUCKY.														
Danville	Kentucky College	Women	Private	×		×	×	×	×	×	×	×	×	×
Lexington	Hamilton College for Women	do	do		×				×				×	×
Millersburg	Millersburg College	do	do	×		×		×					×	×
Russellville	Logan Female College													
Williamsburg	Cumberland College	Coeducation.	Private		×	×	×		×		×		×	×
LOUISIANA.														
Mansfield	Mansfield Female College	Women	Private		×		×	×	×	×	×		×	
New Orleans	Straight University	Coeducation.	do											
St. Benedict	St. Joseph Seminary	Men	do						×					
MASSACHUSETTS.														
Newton	Mount Ida School	Women	Private											
MICHIGAN.														
Detroit	Detroit Junior College	Coeducation.	Public			×	×			×		×	×	×
Do	Martindale Normal School	do	do											
Grand Rapids	Grand Rapids Junior College	do	do											

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[1] As stated by presidents or principals.

Table showing reasons for organizing junior colleges—Continued.

Location.	Institution.	Kind.	Control.	Geographical.	Financial.	Desire of parents.	Desire of students.	Segregation of sexes.	Religious.	Vocational.	Teacher training.	Professional.	Completion school.	Local needs.
MINNESOTA.														
Cloquet	Cloquet Junior College	Coeducation.	Public			×								
Faribault	Faribault High School	do	do		×	×							×	
Hibbing	Hibbing Junior College	do	do	×		×	×			×		×	×	×
Jackson	Jackson Junior College	do	do	×		×	×					×		
Minneapolis	Stanley College	do	Private											
Rochester	Rochester Junior College	do	Public			×	×						×	
MISSISSIPPI.														
Holly Springs	Mississippi Synodical College	Women	Private											
Vicksburg	All Saints College	do	do			×	×	×	×				×	×
MISSOURI.														
Columbia	Christian College	Women	Private				×	×		×	×		×	
Do	Stephens College	do	do		×			×	×			×	×	
Concordia	St. Paul's College	Men	do						×	×		×		
Fayette	Howard-Payne College	Women	do											
Fulton	Synodical College	do	do					×	×	×			×	
Do	William Woods College	do	do											
Glasgow	Pritchett College	do	do											
Kansas City	Kansas City Polytechnic	Coeducation.	Public			×						×	×	×
Mexico	Hardin College	Women	Private											
Nevada	Cottey College	do	do				×	×	×	×	×	×	×	×
St. Charles	Lindenwood College	do	do	×		×	×	×	×	×	×	×	×	×
St. Joseph	St. Joseph Junior College	Coeducation.	Public											
St. Louis	Forest Park College	Women	Private	×		×		×						
NORTH CAROLINA.														
Lenoir	Davenport College	Women	Private					×	×					
Louisburg	Louisburg Female College	do	do		×					×		×	×	×
Weaverville	Weaver College	Coeducation.	do		×									
OHIO.														
Urbana	Urbana University School	Coeducation.	Private		×				×					
OKLAHOMA.														
Chickasha	Oklahoma College	Women	Private											

PENNSYLVANIA.														
Bryn Athyn	Academy of New Church	Coeducation.	Private			X	X		X	X	X	X		X
Reading	Schuylkill Seminary	do	do			X	X		X	X	X	X	X	X
TENNESSEE.														
Jackson	Memphis Conference Institute	Women	Private		X		X		X			X	X	X
Madisonville	Hiwassee College	Coeducation.	do		X				X				X	
Pulaski	Martin College	Women	do		X				X				X	
TEXAS.														
Abilene	Abilene Christian College	Coeducation.	Private											
Clarendon	Clarendon College	do	do	X	X	X	X		X	X	X	X	X	
Greenville	Wesley College	do	do						X	X	X	X	X	
Marshall	College of Marshall	do	do	X	X	X			X					
Meridian	Meridian Junior College	do	do	X	X	X	X		X	X	X	X	X	
Midland	Midland College	do	do											
Sherman	Carr Burdette College	Women	do	X	X		X	X	X					X
Do.	North Texas College	do	do		X					X	X		X	
Stamford	Stamford College	Coeducation.	do											
Stephenville	John Tarleton Agricultural College	do	Public	X	X	X	X			X	X	X		X
Tehuacana	Westminister College	do	Private		X				X				X	
Terrell	Texas Military College	Men	do									X	X	
Thorp Spring	Thorp Spring Christian College	Coeducation	do						X					
Waco	Paul Quinn College	do	do				X		X	X	X	X	X	X
VIRGINIA.														
Abingdon	Stonewall Jackson College													
Bristol	Sullins College													
Do.	Virginia Intermont College	Women	Private		X		X							X
Daleville	Daleville College	Coeducation.	do		X	X	X		X	X	X		X	X
Danville	Auerett College	Women	do				X		X				X	
Marion	Marion College	do	do		X							X	X	
Petersburg	Southern College													
Roanoke	Virginia College	Women	Private			X							X	
WASHINGTON.														
Everett	Columbia Lutheran	Coeducation.	Private		X		X		X			X	X	
Do.	Everett High School	do	Public	X		X				X		X	X	X
WISCONSIN.														
Milwaukee	Concordia College	Men	Private				X		X			X		
Mount Calvary	St. Lawrence College	do	do						X	X		X		
Prairie du Chien	St. Mary's College	Women	do											

Appendix K.—ORGANIZATION OF JUNIOR COLLEGES.

Table showing organization of junior colleges.

Location.	Institution.	Kind.	Control	When organized.	When accredited.	By whom accredited.	Hours' credit at university.	Requirements for graduation.	Degree granted.
ARKANSAS.									
Eureka Springs	Crescent	Women	Private	1910	1913	University of Arkansas	60	60	No.
CALIFORNIA.									
Azusa	Citrus Union	Coeducation	Public	1915	1917	University of California	64	60	No.
Bakersfield	Kern County Union	do	do	1913	1914	do	64	64	No.
East Auburn	Placer Junior College	do	do	1914	1914	do	64	64	No.
Fresno	Fresno Junior College	do	do	1910	1910	do	64	64	No.
Fullerton	Fullerton Junior College	do	do	1913	1914	do	64	64	No.
Hollywood	Hollywood Junior College	do	do	1912	1913	do	64	64	No.
Imperial	Imperial Junior College	do	do						
Long Beach	Long Beach Junior College	do	do						
Los Angeles	Girls Col. School	Women	Private						
Do	Los Angeles Junior College	Coeducation	Public	1912	1912	University of California	60	60	No.
Do	Los Angeles Seminary	Women	Private	1911	1917	do	62	62	No.
Do	Westlake	do	do	1917		do			No.
Pomona	Pomona Junior College	Coeducation	Public	1916	1916	do			No.
Riverside	Riverside Junior College	do	do	1916	1916	do	60	64	No.
Sacramento	Sacramento Junior College	do	do	1916		do	64	64	No.
San Diego	San Diego Junior College	do	do						
Santa Ana	Santa Ana Junior College	do	do	1915	1916	University of California	60	60	No.
Santa Barbara	Santa Barbara Junior College	do	do						
DISTRICT OF COLUMBIA.									
Washington	Miss Madeira's School	Women	Private	1906					No.
GEORGIA.									
Cuthbert	Andrew College	Women	Private	1915	1915	Methodist Episcopal Church (South).		60	A. A.
MacRae	South Georgia College	do	do						
Young Harris	Young L. G. Harris	Coeducation	do	1916	1916		72	72	No.

IDAHO.									
Pocatello	Idaho State Academy								
IOWA.									
Lamoni	Graceland College	Coeducation	Private	1914	1916	University of Iowa	60	60	A. A.
Osage	Cedar Valley Seminary								
ILLINOIS.									
Carlinville	Blackburn College	Coeducation	Private						
Chicago	Lane Junior College	Men	Public	1911	1911	University of Chicago	60	60	No.
Do	Lewis Institute	Coeducation	Private	1896	1896	do	120	60	B. S.
Godfrey	Monticello Seminary	Women	do	1835	1914	do	60	60	No.
Joliet	Joliet Junior College	Coeducation	Public						
Lake Forest	Ferry Hall	Women	Private	1897	1917	University of Chicago	61	61	No.
Mount Carroll	Francis Shimer School	do	do	1910	1911	do	60	60	No.
Peoria	Bradley Polytechnic Institute	Coeducation	do	1897	1897	do	60	70	A. A.
INDIANA.									
Collegeville	St. Joseph College	Men	Private	1914					No.
Fort Wayne	Concordia College	do	do						
KENTUCKY.									
Danville	Kentucky College	Women	Private	1915	1915	University of Kentucky	64	64	No.
Lexington	Hamilton College for Women	do	do	1910	1910	Transylvania	60	60	No.
Millersburg	Millersburg College	do	do	1916	1916	University of Kentucky	60	60	No.
Russellville	Logan Female College								
Williamsburg	Cumberland College	Coeducation	Private	1913			60	60	B. A.
LOUISIANA.									
Mansfield	Mansfield Female College	Women	Private	1913	1913	Methodist Episcopal Church (South).	40	40	M. EL.
New Orleans	Straight University	Coeducation	do	1916					B. A.
St. Benedict	St. Joseph Seminary	Men	do	1893	1893		60		
MASSACHUSETTS.									
Newton	Mount Ida School	Women	Private	1901				2 years.	No.
MICHIGAN.									
Detroit	Detroit Junior College	Coeducation	Public	1915	1915	University of Michigan	60	60	No.
Do	Martindale Normal School	do	do						
Grand Rapids	Grand Rapids Junior College	do	do						

Table showing organization of junior colleges—Continued.

Location.	Institution.	Kind.	Control.	When organized.	When accredited.	By whom accredited.	Hours' credit at university.	Requirements for graduation.	Degree granted.
MINNESOTA.									
Cloquet	Cloquet Junior College	Coeducation	Public	1914	1914	University of Minnesota	64	60	No.
Faribault	Faribault High School	do	do	1915	1915	do	60	60	No.
Hibbing	Hibbing Junior College	do	do	1916	1917	do	60	60	No.
Jackson	Jackson Junior College	do	do	1916	1917	do			No.
Minneapolis	Stanley College	do	Private						
Rochester	Rochester Junior College	do	Public	1915	1915	University of Minnesota	60	60	No.
MISSISSIPPI.									
Holly Springs	Mississippi Synodical College	Women	Private	1916	1916	University of Mississippi	60	64	No.
Vicksburg	All Saints College	do	do	1909				60	No.
MISSOURI.									
Columbia	Christian College	Women	Private	1907	1913	University of Missouri	60	60	A. A.
Do	Stephens College	do	do	1913		do	60	60	A. A.
Concordia	St. Paul's College	Men	do	1907					No.
Fayette	Howard-Payne College	Women	do						
Fulton	Synodical College	do	do	1916		University of Missouri	62	60	A. A.
Do	William Woods College	do	do						
Glasgow	Pritchett College	do	do						
Kansas City	Kansas City Polytechnic	Coeducation	Public	1915	1915	University of Missouri		60	A. A.
Mexico	Hardin College	Women	Private						
Nevada	Cottey College	do	do	1913	1913	University of Missouri	60	60	A. A.
St. Charles	Lindenwood College	do	do	1911	1913	do	60	60	A. A.
St. Joseph	St. Joseph Junior College	Coeducation	Public						
St. Louis	Forest Park College	Women	Private	1915			120	60	No.
NORTH CAROLINA.									
Lenoir	Davenport College	Women	Private	1914	1911	Methodist Episcopal Church (South).		60	No.
Louisburg	Louisburg Female College	do	do	1916		do	62	63	A. A.
Weaverville	Weaver College	Coeducation	do	1916	1916	do	64	64	A. A.
OHIO.									
Urbana	Urbana University School	Coeducation	Private					60	No.

OKLAHOMA.									
Chickasha	Oklahoma College	Women	Private						
PENNSYLVANIA.									
Bryn Athyn	Academy of New Church	Coeducation	Private	1915	1916	University of Pennsylvania	60	60	B. A.
Reading	Schuylkill Seminary	do.	do.	1916	1916	Bureau of Professional Education			No.
TENNESSEE.									
Jackson	Memphis Conference Institute	Women	Private	1916	1916	Methodist Episcopal Church		60	A. A.
Madisonville	Hiwassee College	Coeducation	do.	1916		Board of Education		31	A. A.
Pulaski	Martin College	Women	do.	1914		Methodist Episcopal Church	60	60	No.
TEXAS.									
Abilene	Abilene Christian College	Coeducation	Private						
Clarendon	Clarendon College	do.	do.	1910			60	60	No.
Greenville	Wesley College	do.	do.	1912	1913	State Department	60	60	No.
Marshall	College of Marshall	do.	do.	1917	1917	do.	60	60	No.
Meridian	Meridian Junior College	do.	do.	1909	1909	University of Texas	60	60	A. A.
Midland	Midland College	do.	do.						
Sherman	Carr Burdette College	Women	do.	1917				60	No.
Do	North Texas College	do.	do.	1914	1916	Association of Colleges	60	60	A. A.
Stamford	Stamford College	Coeducation	do.						
Stephenville	John Tarleton Agricultural College	do.	Public	1917	1917	Agricultural and Mechanical College.	60	120	No.
Tehuacana	Westminster College	do.	Private	1914	1915	University of Texas	60	68	A. A.
Terrell	Texas Military College	Men	do.	1915	1916	Association of Colleges	60	60	No.
Thorp Springs	Thorp Springs Christian College	Coeducation	do.	1915	1916	do.	60	60	No.
Waco	Paul Quinn College	do.	do.	1917				60	No.
VIRGINIA.									
Abington	Stonewall Jackson College								
Bristol	Sullins College								
Do	Virginia Intermont College	Women	Private	1912	1912	State Board		60	A. A.
Daleville	Daleville College	Coeducation	do.	1912	1912	Board of Education			No.
Danville	Averett College	Women	do.	1917	1917	State Board			No.
Marion	Marion College	do.	do.	1915	1915	do.		60	No.
Petersburg	Southern College								
Roanoke	Virginia College	Women	Private	1915	1893	Charter	60	60	No.
WASHINGTON.									
Everett	Columbia Lutheran	Coeducation	Private	1915		University of Washington		66	No.
Do	Everett High School	do.	Public	1915	1915	do.	64	64	No.
WISCONSIN.									
Milwaukee	Concordia College	Men	Private						
Mount Calvary	St. Lawrence College	do.	do.						
Prairie du Chien	St. Mary's College	Women	do.	1914	1914	University of Wisconsin			A. B.

Appendix L.—GRADUATES OF JUNIOR COLLEGES.

Number of graduates of junior colleges for the years 1915–1917; also number continuing work in higher institutions.

Location.	Institution.	Kind.	Control.	Years.						Total graduates.	Total continuing.
				Graduates.			Continuing.				
				1915	1916	1917	1915	1916	1917		
ARKANSAS.											
Eureka Springs	Crescent College	Women	Private	5	4	5	3	3	3	14	9
CALIFORNIA.											
Azusa	Citrus Union	Coeducation	Public			4			3	4	3
Bakersfield	Kern County Union	do	do								
East Auburn	Placer Junior College	do	do								
Fresno	Fresno Junior College	do	do	10	12	10	8	10	9	32	27
Fullerton	Fullerton Junior College	do	do	10	14	9	9	12	8	33	29
Hollywood	Hollywood Junior College	do	do	4	8	10	2	6	6	22	14
Imperial	Imperial Junior College	do	do								
Long Beach	Long Beach Junior College	do	do								
Los Angeles	Girls Col. School	Women	Private						1		
Do	Los Angeles Junior College	Coeducation	Public	21	45	48	17	36	39	114	92
Do	Los Angeles Seminary	Women	Private		5	3		4	1	8	5
Do	Westlake	do	do								
Pomona	Pomona Junior College	Coeducation	Public								
Riverside	Riverside Junior College	do	do								
Sacramento	Sacramento Junior College	do	do								
San Diego	San Diego Junior College	do	do								
Santa Ana	Santa Ana Junior College	do	do			7			3	7	3
Santa Barbara	Santa Barbara Junior College	do	do								
DISTRICT OF COLUMBIA.											
Washington	Miss Madeira's School	Women	Private					1	1		
GEORGIA.											
Cuthbert	Andrew College	Women	Private	17	11	15	0	0	2	43	2
MacRae	South Georgia College	do	do								
Young Harris	Young L. G. Harris	Coeducation	do	42	38	44	8	8	6	124	22
IDAHO.											
Pocatello	Idaho State Academy										

IOWA.											
Lamoni	Graceland College	Coeducation	Private	6	3	7	5	2	2	16	9
Osage	Cedar Valley Seminary										
ILLINOIS.											
Carlinville	Blackburn College	Coeducation	Private								
Chicago	Lane Junior College	Men	Public	9	16	18	8	14	15	43	37
Do	Lewis Institute	Coeducation	Private	89	90	60	40	40	80	239	110
Godfrey	Monticello Seminary	Women	do	18	27	28	9	14	12	78	85
Joliet	Joliet Junior College	Coeducation	Public								
Lake Forest	Ferry Hall	Women	Private	11	4	11	6	8	9	26	18
Mount Carroll	Francis Shimer School	do	do	12	11	0	6	8		23	14
Peoria	Bradley Polytechnic Institute	Coeducation	do	108	147	125	20	37	80	880	87
INDIANA.											
Collegeville	St. Joseph College	Men	Private	18	12	14	18	12	18	44	43
Fort Wayne	Concordia College	do	do	27	31	22	27	31	22	80	80
KENTUCKY.											
Danville	Kentucky College	Women	Private	5	11	16	3	6	3	32	12
Lexington	Hamilton College for Women	do	do	3	11	6	2	7	2	20	11
Millersburg	Millersburg College	do	do								
Russellville	Logan Female College										
Williamsburg	Cumberland College	Coeducation	Private	6	8	1	2	5		15	7
LOUISIANA.											
Mansfield	Mansfield Female College	Women	Private	7	21	7	1	8		35	9
New Orleans	Straight University	Coeducation	do			1				1	
St. Benedict	St. Joseph Seminary	Men	do	10	11	8	10	9	8	29	27
MASSACHUSETTS.											
Newton	Mount Ida School	Women	Private								
MICHIGAN.											
Detroit	Detroit Junior College	Coeducation	Public								
Do	Martindale Normal	do	do								
Grand Rapids	Grand Rapids Junior College	do	do								
MINNESOTA.											
Cloquet	Cloquet Junior College	Coeducation	Public			1				1	
Faribault	Faribault High School	do	do								
Hibbing	Hibbing Junior College	do	do								
Jackson	Jackson Junior College	do	do								
Minneapolis	Stanley College	do	Private								
Rochester	Rochester Junior College	do	Public			12			7	12	7

Number of graduates of junior colleges for the years 1915–1917; also number continuing work in higher institutions—Continued.

Location.	Institution.	Kind.	Control.	Years.						Total graduates.	Total continuing.
				Graduates.			Continuing.				
				1915	1916	1917	1915	1916	1917		
MISSISSIPPI.											
Holly Springs	Mississippi Synodical College	Women	Private	4	10	10	1	1	2	24	4
Vicksburg	All Saints College	do	do	1	1	3				5	0
MISSOURI.											
Columbia	Christian College	Women	Private	9	11	21	5	6	9	41	20
Do	Stephens College	do	do	37	47	67	20	17	11	151	48
Concordia	St. Paul's College	Men	do	25	23	20	25	23	19	68	67
Fayette	Howard-Payne College	Women	do								
Fulton	Synodical College	do	do	7	7	11		2	3	25	5
Do	William Woods College	do	do								
Glasgow	Pritchett College	do	do								
Kansas City	Kansas City Polytechnic	Coeducation	Public		8	43		7	25	51	32
Mexico	Hardin College	Women	Private								
Nevada	Cottey College	do	do	5	7	3	1	3		15	4
St. Charles	Lindenwood College	do	do	7	10	14	5	5	7	31	17
St. Joseph	St. Joseph Junior College	Coeducation	Public								
St. Louis	Forest Park College	Women	Private								
NORTH CAROLINA.											
Lenoir	Davenport College	Women	Private	14	18	17	2	1	0	49	3
Louisburg	Louisburg Female College	do	do	11	17	19	2	2	3	47	7
Weaverville	Weaver College	Coeducation	do		18	11				29	
OHIO.											
Urbana	Urbana University School	Coeducation	Private								
OKLAHOMA.											
Chickasha	Oklahoma College	Women	Private								
PENNSYLVANIA.											
Bryn Athyn	Academy of New Church	Coeducation	Private								
Reading	Schuylkill Seminary	do	do	2	2	6		2	4	10	6

TENNESSEE.											
Jackson	Memphis Conference Institute	Women	Private			5			1	5	1
Madisonville	Hiwassee College	Coeducation	do	5	18	1		8		24	8
Pulaski	Martin College	Women	do	7	6	10	4	8	2	23	9
TEXAS.											
Abilene	Abilene Christian College	Coeducation	Private								
Clarendon	Clarendon College	do	do	24	38	40	11	20	24	102	55
Greenville	Wesley College	do	do	12	25	30			6	67	15
Marshall	College of Marshall	do	do								
Meridian	Meridian Junior College	do	do	5	10	12	4	8	8	27	20
Midland	Midland College	do	do								
Sherman	Carr Burdette College	Women	do								
Do	North Texas College	do	do	31	13	10		6	5	54	11
Stamford	Stamford College	Coeducation	do								
Stephenville	John Tarleton Agricultural College	do	Public	5	11	15	3	6	2	31	11
Tehuacana	Westminister College	do	Private		5	6		2	3	11	5
Terrell	Texas Military College	Men	do			2			2	2	2
Thorp Spring	Thorp Spring Christian College	Coeducation	do	10	12	18	6	8	10	40	24
Waco	Paul Quinn College	do	do								
VIRGINIA.											
Abingdon	Stonewall Jackson College										
Bristol	Sullins College										
Do	Virginia Intermont College	Women	Private	27	29	20	6	5	2	76	13
Daleville	Daleville College	Coeducation	do	4	6	7	2	8	0	17	5
Danville	Auerett College	Women	do			7				7	
Marion	Marion College	do	do	5	5	15	0	0	3	25	3
Petersburg	Southern College										
Roanoke	Virginia College	Women	Private	5	3	3	1	2	1	11	4
WASHINGTON.											
Everett	Columbia Luthern	Coeducation	Private			2			2	2	2
Do	Everett High School	do	Public		13	20		9	12	33	21
WISCONSIN.											
Milwaukee	Concordia College	Men	Private						28		
Mount Calvary	St. Lawrence College	do	do	8	6	12	8	6	12	26	26
Prairie du Chien	St. Mary's College	Women	do		1			1		1	1

Appendix M.—ENROLLMENT IN JUNIOR COLLEGES.

Enrollment in junior colleges for the years 1914–1917.

Location.	Institution.	Kind.	Control.	Academy.			1914-15			1915-16			1916-17		
				1914-15	1915-16	1916-17	Freshmen.	Sophomore.	Total.	Freshmen.	Sophomore.	Total.	Freshmen.	Sophomore.	Total.
ARKANSAS.															
Eureka Springs	Crescent College	Women	Private	13	12	12	7	5	12	9	4	13	13	5	18
CALIFORNIA.															
Azusa	Citrus Union	Coeducation	Public	......	......	......	......	......	......	28	5	33	22	12	34
Bakersfield	Kern County Union	do	do	......	......	......	14	2	16	21	......	21	18	......	18
East Auburn	Placer Junior College	do	do	......	......	......	7	......	7	7	13	20	10	2	12
Fresno	Fresno Junior College	do	do	900	1,100	1,300	50	30	80	80	45	125	45	25	65
Fullerton	Fullerton Junior College	do	do	320	364	415	25	10	35	27	17	44	46	13	49
Hollywood	Hollywood Junior College	do	do	1,494	1,471	1,685	69	7	76	85	17	102	83	24	107
Imperial	Imperial Junior College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
Long Beach	Long Beach Junior College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
Los Angeles	Girls Col. School	Women	Private	......	......	......	......	......	......	......	......	......	......	......	......
Do	Los Angeles Junior College	Coeducation	Public	1,651	1,691	1,710	217	40	257	302	74	376	349	86	425
Do	Los Angeles Seminary	Women	Private	......	......	......	......	......	......	......	......	......	......	......	......
Do	Westlake	do	do	63	68	65	11	......	11	7	8	15	6	5	11
Pomona	Pomona Junior College	Coeducation	Public	1,470	1,477	1,594	......	......	......	......	......	......	31	......	13
Riverside	Riverside Junior College	do	do	356	432	405	......	......	......	......	......	......	114	......	114
Sacramento	Sacramento Junior College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
San Diego	San Diego Junior College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
Santa Ana	Santa Ana Junior College	do	do	797	876	842	......	......	......	26	10	36	46	7	53
Santa Barbara	Santa Barbara Junior College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
DISTRICT OF COLUMBIA.															
Washington	Miss Madeira's School	Women	Private	82	98	103	21	......	21	15	1	16	18	1	19
GEORGIA.															
Cuthbert	Andrew College	Women	Private	50	57	59	14	17	31	16	11	27	31	15	46
MacRae	South Georgia College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
Young Harris	Young L. G. Harris	Coeducation	do	......	......	......	......	......	......	......	......	......	......	......	......
IDAHO.															
Pocatello	Idaho State Academy	......	......	......	......	......	......	......	......	......	......	......	......	......	......

IOWA.															
Lamoni	Graceland College	Coeducation	Private	46	36	57	16	6	24	33	8	41	30	16	46
Osage	Cedar Valley Seminary														
ILLINOIS.															
Carlinville	Blackburn College	Coeducation	Private												
Chicago	Lane Junior College	Men	Public	1,605	1,903	2,185	68	12	80	79	30	109	82	42	104
Do	Lewis Institute	Coeducation	Private	554	326	331	125	95	220	127	96	223	109	93	202
Godfrey	Monticello Seminary	Women	do	98	112	122	33	18	51	35	27	62	27	28	55
Joliet	Joliet Junior College	Coeducation	Public												
Lake Forest	Ferry Hall	Women	Private	65	95	94	23	1	34	22	4	26	26	11	37
Mount Carroll	Francis Shimer School	do	do	106	81	108	29	12	41	22	11	33	36	3	38
Peoria	Bradley Polytechnic Institute	Coeducation	do	231	221	196	202	116	318	181	164	345	206	130	336
INDIANA.															
Collegeville	St. Joseph College	Men	Private			231				22	16	38	26	16	42
Fort Wayne	Concordia College	do	do	195	192	183	32	27	59	32	31	63	38	22	60
KENTUCKY.															
Danville	Kentucky College	Women	Private	46	50	51	16	5	21	20	11	31	30	16	46
Lexington	Hamilton College for Women	do	do	122	84	87	30	2	32	30	12	41	29	6	35
Millersburg	Millersburg College	do	do	75	65	65							3		3
Russellville	Logan Female College														
Williamsburg	Cumberland College	Coeducation	Private	75	89	118	6	6	12	4	8	12	7	1	8
LOUISIANA.															
Mansfield	Mansfield Female College	Women	Private	30	40	45	25	7	32	10	22	32	7	7	14
New Orleans	Straight University	Coeducation	do		275	277				20	7	27	9	7	16
St. Benedict	St. Joseph Seminary	Men	do	17	19	21									
MASSACHUSETTS.															
Newton	Mount Ida School	Women	Private	87	101	117	3		3	8		8	12		12
MICHIGAN.															
Detroit	Detroit Junior College	Coeducation	Public												
Do	Martindale Normal School	do	do												
Grand Rapids	Grand Rapids Junior College	do	do												
MINNESOTA.															
Cloquet	Cloquet Junior College	Coeducation	Public				5		5	5		5	10	3	13
Faribault	Faribault High School	do	do	363	452	502				6		6	5	4	9
Hibbing	Hibbing Junior College	do	do		45	60							25		25
Jackson	Jackson Junior College	do	do										8		8
Minneapolis	Stanley College	do	Private												
Rochester	Rochester Junior College	do	Public							17		17	10	12	22

Enrollment in junior colleges for the years 1914–1917—Continued.

Location.	Institution.	Kind.	Control.	Academy.			1914–15			1915–16			1916–17		
				1914–15	1915–16	1916–17	Freshmen.	Sophomore.	Total.	Freshmen.	Sophomore.	Total.	Freshmen.	Sophomore.	**Total.**
MISSISSIPPI.															
Holly Springs	Mississippi Synodical College	Women	Private	53	47	42	16	4	20	22	10	32	28	10	38
Vicksburg	All Saints College	do	do	60	60	60	3	1	4	4	1	5	1	3	4
MISSOURI.															
Columbia	Christian College	Women	Private	63	60	60	......	......	54	......	......	67	......	......	74
Do	Stephens College	do	do	28	32	37	53	37	90	79	47	126	78	68	146
Concordia	St. Paul's College	Men	do	113	100	98	25	26	51	22	23	45	28	20	48
Fayette	Howard-Payne College	Women	do	......	......	......	......	......	......	......	......	......	......	......	......
Fulton	Synodical College	do	do	34	29	27	13	6	19	14	8	22	21	11	32
Do	William Woods College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
Glasgow	Pritchett College	do	do	......	......	......	......	......	......	......	......	......	......	......	......
Kansas City	Kansas City Polytechnic Institute	Coeducation	Public	......	......	......	......	......	......	192	21	213	295	66	361
Mexico	Hardin College	Women	Private	......	......	......	......	......	......	......	......	......	......	......	......
Nevada	Cottey College	do	do	62	68	75	20	10	30	25	15	40	38	20	58
St. Charles	Lindenwood College	do	do	89	84	83	48	7	55	75	10	85	99	14	113
St. Joseph	St. Joseph Junior College	Coeducation	Public	......	......	......	......	......	......	......	......	......	......	......	......
St. Louis	Forest Park College	Women	Private	75	75	65	40	20	60	35	10	45	20	10	30
NORTH CAROLINA.															
Lenoir	Devenport College	Women	Private	60	61	70	20	26	46	24	28	52	22	29	51
Louisburg	Louisburg Female College	do	do	......	......	49	......	......	......	......	......	......	16	14	30
Weaverville	Weaver College	Coeducation	do	83	61	68	20	17	37	20	11	31	14	18	32
OHIO.															
Urbana	Urbana University School	Coeducation	Private	83		20	8	......	8	5	2	7	7	1	8
OKLAHOMA.															
Chickasha	Oklahoma College	Women	Private	......	......	......	......	......	......	......	......	......	......	......	......
PENNSYLVANIA.															
Bryn Athyn	Academy of New Church	Coeducation	Private	61	52	70	7	2	9	8	3	11	8	6	14
Reading	Schuylkill Seminary	do	do	......	......	......	......	......	......	......	......	......	......	......	......

TENNESSEE.															
Jackson	Memphis Conference Institute	Women	Private			76							11	5	15
Madisonville	Hiwassee College	Coeducation	do	86	90	92	14	5	19	10	18	28	10	1	11
Pulaski	Martin College	Women	do			62							11	10	21
TEXAS.															
Abilene	Abilene Christian College	Coeducation	Private												
Clarendon	Clarendon College	do	do	112	115	125	56	24	80	66	40	106	68	48	114
Greenville	Wesley College	do	do												
Marshall	College of Marshall	do	do												
Meridian	Meridian Junior College	do	do	155	175	200	15	5	20	30	10	40	85	30	125
Midland	Midland College	do	do												
Sherman	Carr Burdette College	Women	do	30	32		10	4	14	14	8	17			
Do	North Texas College	do	do		45	49		31	31	22	13	35	19	110	29
Stamford	Stamford College	Coeducation	do												
Stephenville	John Tarleton Agricultural College	do	Public	70	120	150	30	6	36	35	12	47	40	15	55
Tehuacana	Westminster College	do	Private	60	50	60	20	15	35	25	15	40	21	15	36
Terrell	Texas Military College	Men	do		25	27									
Thorp Spring	Thorp Spring Christian College	Coeducation	do	75	80	100	20	10	30	25	12	37	40	30	70
Waco	Paul Quinn College	do	do										11	1	12
VIRGINIA.															
Abingdon	Stonewall Jackson College														
Bristol	Sullins College														
Do	Virginia Intermont College	Women	Private	42	63	52	32	30	62	32	29	51	49	29	78
Daleville	Daleville College	Coeducation	do	100	110	115	10	14	24	12	6	18	12	7	19
Danville	Averett College	Women	do			75							19	7	26
Marion	Marion College	do	do	44	47	50	9	5	14	21	5	26	13	17	30
Petersburg	Southern College														
Roanoke	Virginia College	Women	Private	85	66	54			42			43			49
WASHINGTON.															
Everett	Columbia Lutheran	Coeducation	Private		85	83				4		4	5	3	8
Do	Everett High School	do	Public		964	993				42		42	59		59
WISCONSIN.															
Milwaukee	Concordia College	Men	Private	151	146	110	28	23	51	82	23	55	42	28	70
Mount Calvary	St. Lawrence College	do	do	93	94	95	14	23	37	26	12	38	24	23	47
Prairie du Chien	St. Mary's College	Women	do	65	70	75	5		5	3	2	5	8	2	10

Appendix N.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 36

EDUCATION IN ITALY

By

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SPECIALIST IN FOREIGN EDUCATIONAL SYSTEMS
BUREAU OF EDUCATION

[Advance Sheets from the Biennial Survey of Education, 1916-1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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EDUCATION IN ITALY.

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Specialist in Foreign Educational Systems, Bureau of Education.

CONTENTS.—I. Introduction: Illiteracy.—II. Popular education: (*a*) Elementary schools; (*b*) scuole popolare; (*c*) rural schools; (*d*) agricultural schools; (*e*) vocational schools; (*f*) extra-scholastic activities; (*g*) hospital schools for wounded Italian soldiers; (*h*) projected plans for schools after the war.—III. Middle schools: (*a*) Industrial and commercial schools; (*b*) technical schools; (*c*) normal schools and teachers' institutes; (*d*) ginnasi and licei.—IV. Universities and higher education.

I. INTRODUCTION.

The economic and social exigencies brought about for Italy by her entrance into the war in May, 1915, inevitably led her educational thinkers to submit her traditional system of education to more careful scrutiny than ever before, and to recognize how inadequate it was along certain lines to meet the demands thrust upon it by the new conditions. The first results of the consequent attempt at readjustment were seen in the enlarged scope given the schools—the teachers, the pupils, and the buildings—and in their vigorous cooperation with the nation-wide organizations founded to minister to the immediate needs of the refugees from the invaded Provinces, to relieve the families of men called to the service, and to supply school facilities to an overwhelming influx of pupils. The local and provincial teachers became, very logically, the executive heads of much of this activity; and pronounced benefits accrued to the schools in increased respect for them and popular dependence upon them. Administrative officials, teachers, and laymen interested in education were not slow in taking advantage of the new strategic position of the schools to initiate a propaganda of reform, which, taken up by the educational and secular press, began to direct itself definitely toward legislative action. This awakening of the nation, with the impetus given to educational interest, and the consequent testing of principles and methods hitherto held sacred from all criticism, constitutes the most valuable line for the review of educational matters in Italy for the past two years. Of the projects and plans broached, some naturally failed of enactment into school law; but all show, in their natural sequence from the lower to the higher, a uniform national desire to throw off the dead hand of traditionalism and to make education subserve the actual needs of the nation.

ILLITERACY.

Preliminary to the discussion of the elementary schools proper should come that of illiteracy, a national problem inextricably bound up with them and dependent for its solution upon their progress and betterment. The percentage of illiteracy in Italy has decreased from 68.8 in 1871, the year of the first census after the unification, to 46.7 in 1911, when, of a total population of nearly 35,000,000, approximately 16,000,000 were illiterate. Of prime ethnological and climatological significance in the study of Italian illiteracy are the facts that the Italians are spread over many varieties of climate and altitude; that of the 8,323 communes (June, 1911) only 6 were without illiterates, and only 13 had less than 1 per cent, all these being situated in northern Italy; and that 456 situated in south central and southern Italy had an illiteracy of 75 per cent and over.

Sicily and Sardinia showed the highest percentage of illiteracy; the plateau and mountain Provinces the lowest. Of 30 communes 1,500 meters and more above sea level, 16 showed an illiteracy of less than 5 per cent; 9 of less than 10 per cent; 5 of less than 20 per cent; only 1 of as much as 37 per cent. The highest commune in Italy—appropriately *il commune di Chamois*—showed a percentage of 0.9 for women and 2 for men; the lowest commune in the Kingdom, one-third of a meter above sea level, had a percentage of 57 for women and 42 for men. Of 69 chief provincial cities and towns, 5 showed 10 per cent of illiteracy and 10 more than 50 per cent. Turin had the lowest percentage, 5; Girgenti and Messina, in the extreme southern tip, had 57. The city of Rome showed 15 per cent. The minister of public instruction is seriously doing his best to overcome this chief menace to national life. For the year 1916, 4,246 night schools and 1,923 holiday schools for illiterate adults—an increase of nearly 500 in two years—accommodating approximately 100,000 men and women,[1] were authorized; and of continuation schools for semi-illiterate adults (*scuole di complemento*) nearly 1,400 were authorized for the same year, an increase of nearly 200 over those of the two years preceding. Encouraging as these figures are, however, such adult schools can never be more than palliative measures.

Italian social workers think the cure is to be found not in measures hitherto employed but in systematic increases of appropriations for elementary schools and salaries to elementary teachers. Valuable aid is anticipated from the plan adopted several years ago by the military authorities, whereby illiterate soldiers, veterans as well as recruits, are to be given elementary instruction in the camps and military posts. It is feared, however, that the recently enacted law admitting illiterates of mature age to the electoral franchise will remove a great incentive to self-instruction, and prove a deplorable mistake from the point of view of combating illiteracy.

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[1] Figures of actual enrollment are not available.

II. POPULAR EDUCATION.

(a) ELEMENTARY SCHOOLS.

The elementary schools of Italy, in 1915, enrolled 3,692.024 children between the ages of 6 and 11 years, employed 75,993 teachers, 17,243 men and 58,750 women, and cost the nation, combining central and local expenses, approximately $18,000,000.[1] They are, of course, the pivot of the entire educational system. In the judgment of Italy's progressive social workers a fair if disillusionizing estimate of their influence upon Italian life was furnished by the very unexpectedly high rate of illiteracy, or practical illiteracy, shown in the youth registered for the armies since May, 1916. Many such had had one or more years' schooling in the elementary schools. Acting on this stimulus, a definite move began for the complete reconstruction of the entire lower public school system. Among the most fruitful suggestions made by such bodies as the National Union of Italian Teachers, approved by the minister, and commended by the committee on education in the Chamber of Deputies were the following:

1. The term of years for the courses of the elementary school should be shortened to four years at most; the subjects taught modified in content and scope, and adapted to the comprehension and advancement of the pupils. Fewer subjects should be taught, and these should be taught well. The traditional repetition of programs and schedules should at once be eliminated; and subjects divided into definitely briefer assignments, adapted to the capacity of the pupil.

2. The number of pupils in each class under one teacher should be restricted to 25.

3. School attendance should be absolutely obligatory between definitely prescribed school age limits. This should be rigorously enforced by the civil authorities, with a graduated scale of fines for delinquent parents and guardians.

4. With the improvement in teaching thus demanded, teachers' salaries should be raised from the prevailing average of 200 lire ($40.00) per month to at least twice that amount, and this increase

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[1] Expenses of public elementary instruction are for 1916–17.

should be accompanied by an emphasis upon the quality and standing of the teacher in popular estimation. The elementary teacher should be required to have a teacher's diploma.

5. On the administrative side, more efficient operation of the system of inspectors should be secured by a diminution in the number of vice-inspectors from the present 1,000 to 600, and the increase of the full inspectors from 400 to 600, promotion being restricted to members of the lower grade and made solely on the basis of merit and service. The jurisdiction of either grade should be limited to 30 communes at most. Vice-inspectors should be relieved of all teaching functions, and should be required to devote their attention exclusively to the supervising duties in the zones assigned.

6. Fundamental to all these, greater local power should be granted the communes in the management of the elementary schools, and in the adjustment of courses to local needs and conditions. The subjects taught in remote rural schools should be sharply differentiated from those taught in cities and populous towns.

In furtherance of this movement the Minister of Public Instruction, early in 1918, appointed a committee of inspectors and vice-inspectors, with powers to formulate a report of conditions and of recommendations. This report is awaited with very favorable interest by all the educational forces of the State.

Under the vigorous administration of Sig. Berenini, while no strictly legal reforms in elementary education were made during the past two years, the systematic attempt was made, in so far as this was possible by departmental ordinances, to bring elementary education into vital relation with the needs of every-day life, especially in the rural districts. In this connection, the peasant schools of the *Agro Romano*,[1] in a peculiar sense the ward of the State, have constituted a valuable object lesson as to the possibilities of rural schools. The report of the committee, issued in July, 1917, and covering the 10 years of the schools' existence, shows the harmonious cooperation of the State with the commune, the former working out hygienic and technical problems, the latter those of a moral and ethical nature. The population and teaching material in the *Agro Romano* was, at the inception, regarded as perhaps the most backward to be found in Italy. Beginning in 1907 with 8 schools, enrolling 340 pupils, they have grown to 78 regular schools, and 8 pre-schools (*infantili asili*), enrolling and partly feeding 3,220 pupils. Furthermore, 14 State and communal upper elementary schools combined exist in communities where the original elementary lower schools began operation. These schools are of four types, regular day, vacation, night (for adults), and *infantili asili*. They have rendered through their teaching staff increasingly effective assistance to destitute families and those of men called to the service, and their buildings have served as gathering places in the civic life of the community. These schools have the definite aim of preparing the pupils for their environment, to improve it, and to train them in agricultural pursuits, in building better homes, and in improving means of communication. Especial attention is called in the report to the efficiency of the system of inspection of these schools.

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[1] The strip of the Campagna lying north and west of Rome, covering an area of about 75 square miles.

The direct attention focused by the minister of public instruction upon elementary education has been accompanied by marked success in keeping before the Italian people the vital importance of the schools during the period of national stress. The enrollment in elementary education, by the figures of January 1, 1916, exceeded by more than 500,000 that of the preceding year, and on an estimated gain in population of approximately a million. The branches of education related to the elementary, such as the *asili*, the kindergartens, the auxiliary schools, communal and private, and the parents' associations, have all shared in the benefits of this awakening, and all have been reenforced by private initiative.

A culmination to the active efforts of the Italian Federation of Popular Libraries was seen in the royal decree of May, 1918, making compulsory a library of at least 50 volumes in each elementary school, to be purchased and maintained by the State and commune jointly. It is hoped that this compulsory popular library may become the nucleus for a system of popular education for the older members of the community; that, by means of large increase in the existing grant devoted to popular and school libraries, and a place set apart for the library in each new school, popular extrascholastic classes may be held; that for teachers of such schools recourse may be had, in small rural communities, to such educated persons as there may be in the vicinity, while help may be given by teachers from neighboring towns; and that ultimately attendance at such classes may be made obligatory up to the age of 18.

(b) SCUOLE POPOLARE; RURAL SCHOOLS.

The putting of the *scuole popolare* into operation is the most striking advance made in the field of Italian education during the past two years. The legal enactment constituting them was the result of an organic growth, combining features of the plans submitted by the Minister of Industry, Commerce, and Labor, in December, 1916, and by Sig. Ruffini, then Minister of Public Instruction, in February, 1917. Their compositely social and educational character is well illustrated by the history of the origin and passage of the

law establishing them. The salient points of the *scuole po*
both in organization and aims, are as follows:

1. The Government, with the consent of the local school
the communes, was instructed to found a new type of sch
upon the completion of the fifth and sixth elementary classe
offering instruction of special and vocational character, as well a
development of the courses in the basic subjects, especially arithmetic and practical geometry, drawing, and the elements of physical and applied natural sciences. Such schools were to cover three years additional to the elementary schools, and in the case of communes reserving to themselves the management of the elementary schools, the power of further amplifying the *scuole popolare* was granted.

2. The entire three years' course was to take the name of *scuole popolare*, be recognized as an institution of public instruction in legal standing, and governed by special statute approved by royal decree on the recommendation of the minister. The teaching staff and the program of special and general courses were to be determined by the statute embodying the school. Courses in agriculture, horticulture, agricultural economics, and whatsoever other scientific pursuits were adapted to the climate and needs of the individual locality were to be fostered and taught intensively. Only those teachers that should have pursued special training courses in the subjects they were assigned to teach should be elected to the *scuole popolare*, and only upon the passing of examinations thereon. To be nominated as teacher of Italian, history, and civil ethics, geometry and arithmetic, the teacher must hold the diploma of the normal school or have served at least five years satisfactorily in the elementary public schools. The minimum salary of teachers in the *scuole popolare* was fixed at 2,000 lire ($400) for communes having over 20,000 inhabitants and at 1,500 lire ($300) for communes having less. The weekly schedule of instruction required of each teacher was to be 24 hours. For hours exceeding this he was to receive additional compensation of 80 lire ($16) per annum for each hour, and for hours falling below he was to be required to render such assistance as the giunta of the commune should direct.

3. For admission to the *scuole popolare* the usual *maturitá* examinations required for admission to the first class of the middle and complementary schools should not be valid. Only students completing in actual residence the work of the lower elementary school and passing the promotion examination of the fifth elementary grade were to be admitted to them. Students completing the work of the *scuole popolare* were to be admitted to the first classes of the technical and complementary schools upon the examinations and conditions fixed by the ministerial regulation. The leaving certificate of the *scuole popolare* should be recognized as equivalent to the

leaving certificate of technical schools for admission to posts in various branches of the public service.

Rules governing the passage of certificated students from the *scoule popolare* to the agricultural and vocational middle schools were to be fixed by royal decree on the recommendation of the Ministers of Public Instruction and of Agriculture, Industry, and Commerce.

To sum up: The *scuole popolare* are essentially rural and scientific, of considerable freedom in courses and schedules, supported by the commune and the State jointly, largely autonomous, and in the nature of continuation schools, being, in the words of Minister Berenini, "a bridge between the elementary and the vocational and technical schools." They are designed primarily for children hitherto unable through economic stress to continue in school. Scientific and vocational advantages, hitherto offered only in schools of higher grade and at a distance, are now brought within local reach.

An interesting phase of the *scuole popolare* is afforded in the tentative plans for the establishment of a marine popular school at Venice. As outlined, this school is designed to impart instruction in elementary navigation, making and managing boats, pisciculture in the various phases shown in particular localities, and devices for catching, conserving, and transporting of fish. Promising pupils will be afforded aid in proceeding on to higher technical marine schools already established.

(c) RURAL SCHOOLS.

A distinct move for the establishment of rural schools of elementary grade, below the *scuole popolare*, but offering advantages akin to them, was launched at a meeting of the National Teachers' Union for Popular Education, held in Rome in May, 1918. The discussion was participated in by representatives of the Association for the Interests of Southern Italy, by the director and the Commission for the Peasant Schools of the *Agro Romano*, the school press, and many students of the needs of the rural population. Resolutions were passed calling for the recognition by the Government of the difference of the rural schools from the urban, the need of reducing studies and hours, of limiting the number of pupils under one teacher to 40, and of diminishing the number of holidays, the obligatory establishment of four grades with enforced compulsory attendance, assistance to needy children, increased salaries for teachers, attention to their physical health and comfort, and the naming of a special commission to study the conditions of the schools and children of the rural districts. Such a move marks a distinct advance in educational thought and administration, by which attention was first called on Italian soil to the essential difference between the problems of the city and country schools.

Closely related is the subject of agricultural instruction in the elementary schools, about which much discussion has centered within the past two years. There has been a growing feeling that aside from the lack or coordination between the subjects taught in the elementary rural schools and the environment of the rural children, there is also a very pronounced hiatus in the system between the lower agricultural schools and the elementary schools, by which many children naturally inclined to the study of applied agriculture have no opportunity or encouragement to pursue it. The clear-cut demand voiced in many quarters for the establishment of distinctive rural schools has, in a degree, taken the place of a move for the development of the elementary schools along specifically agricultural lines, being popularly regarded as a substitute for these. Yet many persons interested in education have pointed out that, while each project has its peculiar advantages, the incorporation of elementary agricultural and horticultural courses in the already existent elementary schools is more practical, reaches a larger proportion of pupils, and can be more speedily put into operation, with far less expense and difficulty of adjustment of teachers and courses than would be possible with the distinctive rural schools projected. A foreshadowing of this will be seen below in the section devoted to the training of teachers, where it is emphasized that preparation for imparting instruction in sciences adapted to local needs has been given a prominent place in the new teachers' courses.

(d) AGRICULTURAL SCHOOLS.

By royal decree of 1907 elementary schools of agriculture were established with the aim of preparing students for intermediate and advanced institutions. They offer a three years' course in Italian, language, history, and geography, mathematics and applied geometry, surveying, drawing, calculation, elementary physical and natural sciences, and in the last year intensive training in agriculture and related industries. In 1917 there were 29 of these, only one of which was for women. They are situated in larger centers, enroll local students almost exclusively, and do not especially appeal to rural students. On the latter account, some dissatisfaction has been expressed with them, and plans have been projected to remove them from their town and urban surroundings, and transplant them to sites where experimental farms and first-hand study of concrete problems may be feasible. Such removals would also afford valuable object lessons for the native rural population, as showing the desire of the Government to become acquainted with and to remedy backward conditions in remote communities. It was largely out of this dissatisfaction that the demand for the establishment of rural schools and agricultural courses in the elementary rural schools grew.

The entire subject of agricultural instruction, in all its grades, has drawn unprecedented impetus from the growing conviction brought home to the nation by the war that in the economic and social reconstruction after the war agriculture must play the largest part, and, furthermore, that if education is to be nationalized, the start must be made by giving the study of agriculture the most prominent place in the schools. Thus the different phases of the discussion of agriculture in the schools are but interrelated branches of the one uniform and urgent problem.

(e) VOCATIONAL SCHOOLS.

The auspicious start made toward building up a complete system of vocational training by the provisions of the law secured by Minister de Nava, in 1912, has not been followed by satisfactory actual results. That law called for the establishment of one elementary vocational school based immediately upon the lower elementary schools in each commune of 10,000 or more inhabitants, excluding the larger cities. There are estimated to be 800 such communes; and as the aggregate expense, amounting to 13,000,000 lire ($2,600,000), was from the first a deterrent to the execution of the law, only a few have been established in the most progressive communes. Another article in the law provided for the establishment of vocational schools for the advanced training of young workmen from 13 to 18 years who have attended the upper elementary schools or have had practical apprentice instruction for two years in addition to the leaving certificate of the lower elementary schools. It is estimated that the number of these youths is approximately a million, and that to establish and adequately equip the necessary number of such schools at least 5,000,000 lire additional would be required. Attention has repeatedly been called by social workers to the great good such schools would do; and it is to be hoped that among the first tasks undertaken in the reconstruction of Italy's school system after the war will be the revival of the De Nava law on vocational education.

An interesting experiment in lowering the age and requirements necessary for pupils to enter essentially vocational schools has been made near Castillo, in Umbria, for boys of the invaded district between 9 and 14 years. Organized under the legal title of *Colonia dei Giovine Lavoratori*, and by private beneficence, the project was regarded as of such social significance that an original grant of 75,000 lire ($15,000), supplemented by subsequent ones, was made by the Minister of Arms and Munitions, and later increased by subscriptions from the American Red Cross and private benefactions. The first *colonia* to be established has for its scope to secure tracts of unused land, to organize the labor of the boys applying for entrance, and to offer not only agricultural courses but also, by arrangements with the industries of neighboring centers, training in trades and handicrafts. There is also contemplated an essentially instructional side in a four years' elementary course, supplemented by a two years' popular course, but of more intensive character than the *scuole popolare*. In view of the unusual circumstances of the students, especial attention to ethical training is felt to be necessary. If successful it is hoped that the Government will take over the movement, and the experiment be expanded to a chain of such *colonie*.

(f) EXTRA-SCHOLASTIC ACTIVITIES.

Signs of the awakening of the schools to national service along many lines apart from the strictly scholastic abound during the past two years. Exhibits of didactic material, manufactured by school children, have been held at various points, notably at Naples, showing both regional products and use of materials, as well as national character and utility. The real economic value, also, was plain, in view of the closing of the Italian frontiers, and the cutting off of school supplies as well as others. Amid these most adverse conditions the discovery that Italian talent was able to devise and make school-room equipment constituted a long step forward in Italy's economic emancipation. In pursuance of the project of a national system of book printing and binding set forth by a meeting of all interested in handicrafts, held at Milan in April, 1917, courses in bookbinding in certain city schools were attempted, and excellent work along this line has been exhibited. The Association of Teachers of Physical Training in Italy, meeting in June, 1917, vigorously urged definite courses in physical training and especially that sports be incorporated in the elementary schools. The latter demand drew unexpected impetus from the physical training imparted recruits, with the consequent radical improvement in physique and morale. Advocates of the movement claimed to see in the final triumph on the Piave the manifest proof of the value of sports and athletics. Schools of child welfare have been established at various points, generally in connection with orphanages and *asili* for destitute children from the invaded regions. Their aim has been to give a practical and solid basis of training to all persons intrusted with the care of children, to diffuse a knowledge of the rules of hygiene among the women of Italy, especially in the crowded centers and in remote sections, and thus to combat Italy's high rate of infant mortality. While not under the control of the Government, these schools have had its cordial encouragement and frequent subsidies for certain lines of investigation, and they have exercised a definite reciprocal effect upon the official system of public instruction.

(g) HOSPITAL SCHOOLS FOR WOUNDED ITALIAN SOLDIERS.

Wounded Italian soldiers were given elementary instruction in hospital schools at various points, conducted by teachers assigned from the public schools and by volunteers. Chief of these were the schools at Milan and Naples, which led the way in securing governmental inspection and concession of the right of examinations for the third-grade finishing certificate of the elementary schools. The work was organized along the two lines of instruction for total illiterates, and for backward soldiers of mental advancement measured by the work of the fifth and sixth elementary. Classes in choral singing were introduced with the aim of discovering wounded men of musical abilities and training them for popular choral instruction. Marked interest was aroused among the pupils of the public schools by a governmental appeal for voluntary contributions to a permanent fund for reeducation work among the soldiers. Practically every elementary school in the Kingdom contributed.

Accounts of this eminently successful work are of real pedagogical value to students of the relative capacities and aptitudes of children and adults. The following extracts are taken from the account of Signorina Paltrinieri, one of the teachers in the Milan school, who has best outlined the spirit and significance of this work in the life of the nation:

> These schools were not for the physical rehabilitation of the wounded, nor for their training in trades and crafts; they were for the teaching of book subjects and for adults, most of whom, even the youngest, would seem beyond the plastic age. And yet the results were amazing.
>
> As regards the teaching material, all were peasants or drawn from the lowest urban classes, economically and socially. Most were unable to read and write, though many had attended one or more of the first three grades of the elementary schools, but had dropped out and had forgotten practically all they had ever learned. The distinctive characteristic common to all was the intense desire to retrieve lost time and opportunities. The hospital schoolroom was not only crowded during school hours, but was after hours a center for those wishing to finish tasks and to talk over problems connected with the lessons. There were many points of difference between the ordinary school urchin and these feverishly ardent boys of larger growth. These soldier pupils forgot that the day was a holiday. They always had in the bookbag the book and copybook and pencil needed and were always proof against such distractions as impede the usual elementary school. To them the conquering of the task in hand was the vital point.
>
> The reasons given by the soldier pupils for their ignorance were strikingly illuminating for the life and psychology of the people; the schoolhouse was too far from home, the boy had no good clothes, the family could not or would

not get along without his earnings, etc. With yet others plain laziness and loafing, confessed with boyish ingeniousness, made them shirk, and they quit school as soon as possible. "If my daddy (pare) had only given me a sound licking and marched me off to school" was the most common lament, voiced in all the dialects of Italy.

In point of *intelligence*, pure and simple, the child has an undoubted advantage over the adult. His mind is fresh, open, ready to receive the stamp upon the proverbial wax. The adult is what he is. We can make him better; we can change the directions of his thoughts and ideas; but mold him as we will—no.

In *application*, of course, the adult has the indisputable advantage. He knows the hours for lessons are limited. He is determined to get the very most out of them. His attention is seldom distracted. Even distinguished visitors—so eagerly welcomed by children—can not break the severe and imperturbable calm of these soldier pupils. Visitors pass from bench to bench, smiling, enthusiastic, patronizing. These model pupils look up, answer respectfully, smile from the depths of those inscrutable eyes—and even before the disturbing element is well out of the room have plunged again into their tasks.

As regards the *will*, this is the wedge for the adult. By dint of patience, of study, of determination, they do the impossible. The will, too, acts powerfully on their physical condition. Men, wounded in the right hand, grasped the pen and guiding the wounded member with the sound one, day by day by desperate efforts gained freedom of movement. Men with head wounds suffered terribly under certain atmospheric conditions, but they never missed school.

In *experience of life* and *stock of ideas* no comparison is possible. Other considerations apart, an enormous saving of time and energy was found in not having to explain the ordinary phenomena of life to the adult, as has to be done with the child. The adult applies everything as he progresses. In point of *stock of words*, however, the child does not differ so markedly from the illiterate adult. The Italian peasant, no matter of what dialect, has an extremely limited vocabulary. So has the child. But the child is always, consciously and unconsciously, enlarging his stock of words; the adult is content with what he has.

Coming now to the application of these diverse mental aptitudes to the acquisition of school subjects, less difficulty in *direction* was encountered by the child than by the adult. The child has a *tabula rasa* of a mind. He hears a sound clear and distinct. He does not confuse it with other sounds. It does not start in him a train of kindred concepts. He puts down what he hears. The adult, on the other hand, hears a sound; it awakens innumerable dormant associations. His dialect is another ever-present obstacle. The struggle to cut these away is unceasingly hard. Repetition, untiring repetition by teacher and pupil, is indispensable.

On the subject of *composition* for literary form the child's composition is better; for subject matter, the adults. A soldier had for some time been in an agony of suspense at not hearing from home. One day he had assigned to him as a theme to write a letter home asking some favor. He fell to work and wrote desperately, the teacher watching him. The letter was full of ardent affection, of deep grief, of hope, of encouragement to his dear ones, but on the theme assigned nothing. He protested with emotion that he could not write to ask a favor of poor folk who had hardly a roof over their heads.

In *arithmetic* and *calculation*, as is to be expected, the adult far outstrips the child. No time is wasted on the tables with soldiers—that inexhaustible fountainhead of wasted time for children. The man does the problem, does it correctly, verifies it, out of some incident in his old trade or calling and goes on acquiring new facility.

In *penmanshp* and *drawing*, as between the man and the child, the adult has a hardness of muscle, the child a weakness of hand. The man has the better trained eye and sense of proportion, the child a singleness of vision and an ability to isolate the object.

In *reading*, the adult has advantages of application that enable him to do in two or three months what it takes the child a year to do. The intensive drill upon individual letters is feasible and fruitful with adults, being a drill soldier pupils enjoy and continue after hours.

As regards the *explanation of passages read*, adults make a better showing than children. The quicker witted and more attentive the child is, the more does he tend to repeat the words of the original. The adult, on the contrary, changes, adapts, discourses on it, if he is talkative, brings it to the touchstone of his own experience, approves or rebukes, in brief, incorporates it into his mental life.

So with *grammar*, with *history*, with *geography*, with *oral arithmetic*, with the elements of *physical sciences*, each one chronicles a series of victories for the adult over the child. Take the field of history. The child thinks the reign of Servius Tullius the least interesting of all; the adult, though a peasant, grasps the force of its economic and social changes. The child will glibly tell of the exile of Charles Albert, adding pathetic personal touches; the man will tell of the importance of his connection with the constitution of 1848.

Now, what are the net results of this teaching of adult soldier-pupils? Illiterates, or practically such, in less than one year passed the examination *di compimento* (admission to the fifth grade). At the *Ospedale della Guastalla*, an illiterate Sicilian lad, with a severe wound in his head, from which the fragment of shell could not be extracted, and with his left side completely paralyzed, passed the examination with the following marks on a basis of 10; 8 in dictation, grammar, oral and written arithmetic; 7 in explanation of passages read; 6 in penmanship, composition, and reading.

Rather industrial than instructional in scope, but closely related is the work of the National Association for Artistic and Industrial Assistance to the Wounded and the Invalided, organized in July, 1917, and counting among its membership thousands of eminent men and women in all parts of Italy. Its aims are to forward the artistic and industrial progress of soldier pupils by governmental and local encouragement, to assist former pupils in the establishment of business, to assist in the disposal of their products for them by the establishment of provincial and urban magazines, to enlist the active cooperation of eminent artists in all parts of Italy, and to organize committees in every part of Italy. The work of the association has been of great value in spreading an interest in matters artistic among the masses of the people, and in showing them the means of developing latent talent.

(h) PROJECTED PLANS FOR SCHOOLS AFTER THE WAR.

Since early in the war steadily increasing attention has been devoted to the subjects and methods of public instruction adapted to post-war conditions. This took definite shape in the appointment, in June, 1918, by royal decree, of a commission, headed by the Minister of Public Instruction and composed of members of the Consiglio Superiore and persons eminent in the educational life of Italy, to study and report upon the subjects and form of education adapted to the solution of the most urgent problems that will then confront the nation. The scope of this commission as a whole is practically unlimited, comprising, as it does, all forms of national, social, and educational activity. It will work by sections, one of which will have under its especial charge the study of national culture, educational and instructional. The tentative outline of the activities of the commission indicates that it will study not merely the transitory and superficial measures necessitated by disarmament, but the graver problems consequent thereon. The commission is instructed to take a historical survey of Italian school life under all its phases and to avail itself of all social and educational investigations undertaken by official and private organizations. The appointment of the commission has been received with enthusiasm by Italian teachers of all grades, who indicate an ardent wish to cooperate in all its labors.

By an interesting coincidence the composite report of the commission appeared the same week as the signing of the armistice. The plan of the several educational reforms, unanimously approved and recommended for immediate action, fell under the following heads:

1. The thorough execution of all school laws and the overhauling of the national financial system to this end.
2. The organic inclusion, within the national system of education, of kindergartens and nursery schools by means of the subsidizing or nationalizing of existing ones, and the establishment of many others.
3. The continuous construction, within the period of five years, of all school buildings lacking to the needs of population and the legal announcement of compulsory attendance upon them.
4. The establishment of at least one compulsory school of four grades in each commune.
5. The establishment of especially adapted secondary schools for the preliminary professional training of teachers.
6. The raising of the minimum salary of teachers to 3,000 lire ($600) and the investing of the teaching profession with enhanced moral and social prestige.
7. The lengthening of the school year and the requirement of the teacher to take part in civic and communal tasks.
8. The fixing of the final leaving age of pupils at 18 years.
9. The establishment of compulsory schools for illiterate adults up to 45 years.

10. The establishment, on the application of communal authorities, of popular courses, schools of hygiene and sanitation, languages, etc.

11. The subordination of the national budget to the needs of popular education, and not vice versa.

12. The paying of greater attention to woman's place in the national life, with especial regard to the needs of peasant and laboring women.

To students of education the striking feature of this move is the proof it affords that Italy conceives of no renewal of her economic life without the accompanying reform in her educational system.

III. MIDDLE SCHOOLS.

In the Italian scheme of education the *scuole medie* are held to include industrial and commercial schools, the *istituti tecnici*, the normal schools, the *ginnasi* and the *licei*.

(a) INDUSTRIAL AND COMMERCIAL SCHOOLS.

The exigencies of the war have brought out clearly the need of reform in the general group of industrial schools, occupying as these do so important a place in the practical training of the nation's youth. Especial attention began to center two years ago upon the industrial and commercial divisions, and early in 1917, by ministerial decree, the few schools of this type already in existence were developed, their numbers largely increased, and their relations with the elementary schools below and with the *istituti tecnici* above were clearly defined.

The industrial schools thus enlarged are denominated Royal Industrial Schools of the Second Grade. They are 103 in number, situated in the populous centers, and designed to offer in a four-years course the theoretical and practical knowledge necessary for the future heads of artistic and industrial manufacturing establishments. To the first class of these schools are admitted pupils having either (*a*) a certificate of promotion from the vocational schools of the 1st grade, or (*b*) the leaving certificate from the higher elementary schools, or (*c*) in the discretion of the director, those 12 years of age and presenting an examination upon selected subjects comprised in the programs of the higher elementary course. Continuous progress in the industrial school group was further sought in the new rules for the admission of pupils from the industrial schools of the 2nd grade to the more highly specialized schools of the 3d grade. For this was accepted, (*a*) the leaving certificates of the technical or complementary school, royal or private, or (*b*) the certificate of promotion from the second to the third communal course of the Royal Institute of Fine Arts, or (*c*) certificate of promotion examination, or (*d*) the leaving certificate of a royal commercial school of the second grade with special examination on selected subjects. The 19 royal industrial or vocational schools of the third grade offer specialized courses in weaving and dyeing, silk industry, working on hides and skins, mechanics, paper industry, forestry, typography, electric engineering, and radio-telegraphy. Admission of pupils of the second grade to them also requires the certificate specifying the specialty in which the pupil has worked, or the leaving certificate of the commercial school embracing subjects continued in the royal vocational schools.

Similarly the 27 royal commercial schools of the second grade hold the same rank as the industrial, affording instruction for managers and employees of commercial pursuits, and offering a course covering four years, or, in the case of schools annexed to a royal commercial school of the third grade or advanced grade, three years. Admission to the first class of the commercial schools of the second grade is (*a*) upon completion of 10 years of age and the certificate of the *maturitá* examination from the higher elementary schools, or (*b*) the leaving certificates of the royal commercial school, or (*c*) certified three years' attendance thereon, or (*d*) in the discretion of the director, completion of 12 years of age and the passing of examination upon selected subjects of the course of the commercial school. The 11 royal commercial schools of the third grade, located in the large cities, admit only complete graduates of schools of the second grade.

By the regulation, especial attention is paid to the professional qualifications of the directors of these respective schools. The director of the industrial school shall be in immediate charge of instruction in the technical subjects and the related applied sciences. If in a women's school, the directress shall be in immediate charge of the subjects of a domestic or graphic nature, or those constituting the basis of the school's existence. Similarly, in the royal commercial school the director shall be in immediate supervision of instruction in the subjects of international commerce and trade, physical, political and commercial geography, and legal and economic subjects.

(b) TECHNICAL SCHOOLS.

Ranking immediately above the industrial and commercial schools of the second grade are the technical schools intermediate between the higher elementary schools and the *istituti tecnici*, admitting pupils upon the completion of the higher elementary courses, and on special examination in Italian, mathematics, and the elements of the physical sciences. Their courses cover three years, and upon their completion the pupil is admitted to the *istituti tecnici*, the most highly specialized of all the divisions of secondary education. In the field of the lower technical schools Sig. Berenini has proposed to the Consiglio Superiore certain reforms calculated to subserve more fully the scientific needs of the nation. Chief among these are:

1. The decrease of two hours weekly in the schedule of each class, thus leaving three afternoons per week free of teaching, to be devoted preferably to physical education and the combination of the sciences and mathematics, thus preserving in the school all the subjects prescribed by the law.

2. The lightening of some subjects and distribution of others through the three years, as, for example, in Italian, the abolition of all rules of composition as well as all memorizing of names in Italian literature; the coordination of all study of Italian literature with history, substituting for the systematic and chronological study of history the biographical and episodic method; the reservation of the difficult points of cosmography for the second class; the beginning of geometry in the first class, and its limitation to a purely experimental and graphic nature.

3. The rendering identical the technical schools for girls with those for boys, in subjects, arrangement of courses, and schedules, except for instruction in domestic arts.

(c) NORMAL SCHOOLS AND TEACHERS' INSTITUTES.

The training of teachers for the elementary schools of Italy was earnestly and continuously discussed for years before Italy's entrance into the war. With new and unprecedented demands upon the schools, there has been a growing conviction that the traditional subjects and methods of training teachers were too exclusively literary to prepare teachers for the elementary school and that they must be thoroughly reconstructed. Under the existing system, teachers are trained in normal schools, separate for men and women, and offering three years' courses in pedagogy, lectures and theory, ethics, Italian language, literature, history and geography, mathematics, elements of natural sciences, hygiene, drawing, penmanship, elements of agriculture, gymnastics, and practice teaching in the first grade of the elementary school. For men, gymnastics and manual arts, and for women, household arts and kindergarten teaching are also required. Completion of the studies of the higher elementary school with examinations on selected subjects is necessary for admission.

In the criticism of the old order of training, and the demand for a more modern type, individuals, teacher's associations, and the press participated. The National Teachers' Association, meeting in Rome in 1918 and using as a basis the results of the referendum taken among the teachers of 17 cities and towns, well summed up the situation as follows:

The elementary school had in the last few years become completely transformed in its character, and the demands made upon it had changed as well. It had doubled its content, and in its programs, no matter with what shortcomings, was at least attempting to embrace a new field of activities, and so to keep abreast of modern conditions. With this development, the normal schools, through no fault of their own, had not kept pace. They had been forced to continue to train teachers for the simple and primitive schools of half a century ago, long since outgrown, and they simply could not give adequate preparation for the complex demands of modern life.

This nation-wide demand for normal teaching reform crystalized early in 1918 in a bill presented by Sig. Berenini for passage by the Italian Parliament. Its progressive nature once made known, the bill found instant and hearty support, and the senate passed it with but little delay. In the Chamber of Deputies, however, it encountered unexpected opposition, and in June, 1918, was referred to a conference committee. Though its actual enactment was thus postponed, yet its passage is confidently anticipated. In content and scope this bill marks so decided an advance in the training of national teachers as to merit a careful examination of its main lines, based upon the actual legal provisions.

1. *Purpose.*—The teachers' institute (*istituto magistrale*) has the aim of preparing teachers for the elementary and popular schools. It shall be for men and for women, separate. If for men, it shall be of four years; if for women, seven years, the first two years to be counted as belonging to the *istituti* of the first grade, and the last five to those of the second grade.

2. *Relation to the present normal schools.*—The existing normal schools for women, with the annexed practice schools, are to be transformed into women's *istituti magistrali* of seven years; those without annexed practice schools are to be transformed into men's *istituti magistrali* of four years, corresponding to the last four years of the seven-year type, particular details to be left to the ministerial decree. Existing provincial, communal and other *istituti* for the training of teachers may secure rating as *istituti magistrali* upon conforming in all respects to the present law.

3. *Subjects to be taught.*—The subjects of the first six classes of the women's *istituti* shall be: Italian language, literature, history and geography, general pedagogy and ethics, French, mathematics, physical and natural sciences, domestic arts, drawing and penman-

ship, singing and physical education. The subjects to be taught in the first three classes of the men's *istituti* shall be identical with those for the corresponding years of women's *istituti*, except for the addition of agriculture, hygiene, and two years of manual arts. In the last class of all *istituti* shall be: History and methodology of pedagogy, hygiene, agriculture, singing, advanced physical education, and practice teaching in the annexed elementary or popular school, or kindergarten. Instruction in hygiene is to be imparted by specialists, and that in agriculture by a traveling instructor, or by an instructor in a neighboring practical school of agriculture, or by governmentally certified individuals. In localities where constant emigration exists, instruction may be imparted to pupils of the last year by qualified persons on the Government, industries, social conditions, etc., of the countries to which such emigration tends, in 10 lessons outside the regular schedule. For each such course of instruction in hygiene, agriculture, and emigration a fee of 20 lire ($4) per year may be charged. The weekly schedule of the *istituto magistrale* shall not exceed 24 hours for any class, not including those devoted to singing and physical education. Details of the order of subjects, etc., shall be determined by the subsequent ministerial regulations.

4. Annexed practice schools.—To every *istituto magistrale* shall be annexed for purposes of practice teaching at least one complete grade of the elementary or popular school, under the direction of the head of the *istituto;* and if there are more than three sections of these there shall be annexed one additional grade of the practice school for each section. To every women's *istituto* there shall be annexed one class at least of the *asili infantili*, it being left to ministerial regulation to reorganize the existing Frœbelian classes in accordance with the needs of the *istituto*. Subject to the general oversight of the head of the *istituto*, the management of the annexed practice schools shall be entrusted to the professor of pedagogy, except that the courses in mathematics, physical and natural sciences in such practice schools shall be entrusted to the teacher of these sciences. In instructional matters the teacher of pedagogy shall be assisted by the professor of manual arts and drawing in such manner as shall be determined by ministerial decree.

5. Admission to the istituti magistrali.—Admission to the first class of the women's seven-year course shall be the same as that required for admission to the first class of the middle schools of the first grade; to all other classes by promotion examination.

Admission to the first class of the men's four-year *istituto* shall be by certificate of promotion from the third to the fourth class of the *ginnasi* on the basis of the required examination; to all the other classes by promotion examination.

6. *Relation to other schools.*—The relation between the several classes of the *istituto magistrale* and the other middle schools shall be determined by the Giunta of the Consiglio Superiore. Promotion shall be governed by the rules in force for the other middle schools; but examinations shall be obligatory throughout the school year, and in pedagogy and ethics up to the end of the next to the last year. A special examination on hygiene and agriculture is required at the end of the course. Passing of the yearly examinations upon singing and physical education is required for promotion and for the qualification for teaching.

7. *Diplomas, fees, etc.*—The *istituti magistrali* confer the diploma of qualification for teaching in elementary and popular schools upon the completion of the respective seven or four years' courses. Candidates must have completed their eighteenth year.

Graduated fees for admission, attendance, and examinations in various subjects and years are charged.

8. *Equipment.*—Every *istituto magistrale*, both for men and women, shall be provided with (*a*) a scientific cabinet for instruction and experiment, in charge of the respective teachers; (*b*) laboratories for manual arts, hygiene, agriculture, drawing, and practice teaching, each in charge of the respective teacher; (*c*) a teachers' museum for instruction and practice teaching, in charge of the teacher of pedagogy; (*d*) a library and reading room, in charge of the teacher of history and geography; and (*e*) a well-equipped gymnasium and hall for teachers of physical education and singing. For expenses incurred under this head, 150,000 lire ($30,000) shall be appropriated for 1918–19, to be increased by 50,000 annually up to 300,000 lire.

9. *Maintenance.*—The Province in which the *istituto* is situated shall provide the site and building, the furniture and school equipment, exclusive of the strictly didactic apparatus detailed above, and lighting and heating service. The commune in which the *istituto* is situated shall provide the site, buildings, and equipments of the practice schools annexed, and the salaries of the teachers employed in them. The Government shall provide the salaries of the teaching personnel of the *istituto* itself.

10. *Teachers.*—The teachers of the *istituto* shall be as follows, with the grouping of subjects as indicated:

One teacher (Class A[1]) of pedagogy, ethics, and practice teaching; 3 teachers (2 of Class A and 1 of Class B) of the Italian language, literature and history, and geography; 1 teacher (Class A) of French; 1 teacher (Class A) of natural sciences; 1 teacher (Class

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[1] By Class A are denoted incumbents of the full chair, with complete control of subject and methods. By Classes B and C are denoted assistants and subordinates, responsible to higher authority.

A) of manual arts; 1 teacher (Class B) of drawing and penmanship; 1 teacher (Class B) of domestic arts; 1 teacher (Class C) of physical education; and 1 instructor of hygiene and singing.

If in women's *istituto*, 1 teacher, of Class B, of domestic arts, and 1 mistress of the infant class.

Especial care shall be had in the selection of the teacher of manual arts. He shall be selected only by competitive examination and must be a person holding the regular qualifying degree in manual arts; or, under temporary provisions of the ministerial regulation, a person who has for four years taken summer courses in these subjects, with successful qualifying examinations. For the men's *istituto*, also, an instructor in agriculture is required. With the view of ultimately establishing distinctive schools of manual arts, provision shall be made in the men's *istituto*, in the discretion of the Consiglio Superiore, for two years' courses in manual arts, embracing practical exercises, mechanics, technical training, drawing, and the history and theory of manual-arts education.

11. Application of the law.—The present law, in its practical effects and modifications of groups of studies, shall be gradually applied from the beginning of the school year of 1918–19, in accordance with specific regulations to be promulgated by the Consiglio Superiore. Administrative heads of the present normal schools shall be ex officio heads of the new *istituti magistrali*.

Despite some points on which there is a difference of opinion among educational thinkers—as, for example, the organic grouping of Italian history and geography in one chair—the spirit and provisions of the projected law receive practically universal approval throughout Italy. It is regarded as realizing reforms long needed in the training of teachers, especially in the following respects: In prolonging the course of study, in reducing the excessive number of hours of weekly schedule, in abolishing pretentious striving after effect, in combining related courses of instruction, in organically correlating them, and so leading the pupil up to the concentration upon exclusively pedagogical subjects during the last year. The consensus of opinion is that while a more radical project for the training of teachers might have been presented, the one actually formulated is practical and feasible, and, while not too far in advance of the existing system, yet marks a long step forward in securing a national body of teachers better trained than any preceding one.

(d) GINNASI AND LICEI.

The wave of criticism directed against the various grades of education did not stop short of the traditional, and by their very nature, conservative middle schools of these titles. Appealing as they do almost exclusively to boys intended for the universities and the professions, they have more steadily and successfully resisted all innovating projects than any other type. However, even the traditional *ginnasio-liceo* of the classical type, while it has maintained intact its eight years of prevailingly cultural character with emphasis upon the ancient classics, has yet had to accept one hour additional weekly in history throughout the course, an hour additional in mathematics for two years, and compulsory study of physics, chemistry, and physical education. These modifications were the work of the Consiglio Superiore, in 1917, which thus sought to adapt this type of institution to the urgent needs of additional instruction in sciences brought out by the war. Furthermore, criticism of static conditions shown by the enrollment of schools of this narrow type as contrasted with the far younger technical schools of the same grade had its effect in the demand for change. It was pointed out that the 458 schools of the traditional type, scattered over Italy, enrolled only 13,000 more pupils in 1917 than they did in 1901—54,000 against 44,000; whereas the newer technical schools, numbering 461 and existing only in central and northern Italy, had advanced from 50,621 pupils in 1901 to 182,194 in 1917.

Italian critics of this traditional type of school maintain that its chief weakness is the excessive extension of the programs of study, due to the desire of the educational authorities to please both parties and to impart at once a general and a special culture. Out of this very complexity has grown, however, an institution of a very useful nature, and one that, properly modified, bids fair to arrive at a happy mean intermediate between the two systems of training. This is the institution denominated since 1911 the *ginnasio-liceo moderno*, and approaching closely the type of scientific high school in America. By a species of compromise, the Consiglio Superiore in 1917 increased the total number of hours of instruction in Latin to 41, the largest assigned any one subject, but at the same time it increased the requirements in modern languages by one hour weekly in each throughout the entire course, allowed alternation between English and German, and increased the already existent scientific requirements. Despite the demand in this as in other fields for the diminution of hours of weekly recitation the excessive number already existing was left untouched even in the *ginnasi-licei moderni*, ranging from 22 to 27 or 28 hours, thus affording proof of its unchanged conservatism.

Discussion of the modifications in the middle school best adapted to suit needs after the war has already arisen. It is agreed that more attention must be paid the sciences, modern languages, and the modern sociological subjects; that the undue preponderance of examinations must be abolished, with transfer of emphasis to the daily tasks; that the excessive number of pupils assigned to each teacher must be decreased to 30 or 40; and that better training must be demanded for teachers.

IV. UNIVERSITIES AND HIGHER EDUCATION.

While no fundamental university reform, projected or actual, is to be chronicled for the past two years as in the case of other branches of education in Italy, yet in spirit the universities have sustained significant changes in adapting themselves heartily to the war needs of the nation. It is safe to say that no other intellectual influence has been so powerful in waking the nation to a just conception of the historical and ethnological reasons for Italy's entrance into the war, and in keeping alive the sentiments of patriotism and consecration to duty as has been that of the universities. The first meeting of the National Association of University Professors to be held under war conditions gathered in Rome in December, 1916. The subjects proposed for discussion reflected the new and vigorous spirit that had come to be infused into the ancient seats of learning:

1. The future of the Italian book, and the ways and means of developing the national publication of literary and scientific material.
2. Methods of fuller participation by the universities in the aims and prosecution of the war.
3. The attracting of foreign students to Italian universities, and the proper rating to be given them for work presented.
4. The development of a national system of science, with endowments of scientific museums, cabinets, and laboratories.
5. Fundamental reforms in university administration and instruction relative to war needs, especially in the schools of pedagogy, the literatures of allied countries, and the applied sciences.
6. War-time preparation to be required of entering students.
7. Reasons for the resumption of the competitions for university chairs falling vacant, the naming of the rectors by the ministry only for the period of the war, and guarantees of impartial hearing of university professors under charges before impartial and competent authorities, and a system of international interchange of professors.

Formulated reports embodying the sentiment of the association upon these topics were transmitted for the approval of the minister and for his support for legal enactment.

In the essentially instructional domain, of interest is the concerted move to enlarge and extend the teaching of modern languages in many of the larger Italian universities. Fostered by the Minister of Public Instruction and the Consiglio Superiore, especial efforts

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 37

EDUCATIONAL CHANGES IN RUSSIA

By

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DIVISION OF FOREIGN EDUCATIONAL SYSTEMS
BUREAU OF EDUCATION

[Advance Sheets from the Biennial Survey of Education, 1916-1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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Division of Foreign Educational Systems, Bureau of Education.

CONTENTS.—Introduction: Historical development—Secularization of schools—Administration of schools: Provisional Government; Bolshevik régime—Parents' associations—Abolition of restrictions: National and religious groups; Private instruction—Educational ladder—Teachers' training institutions—Reform in spelling—New textbooks and other publications—Higher education: New universities and faculties—Technical education—Adult education.

INTRODUCTION.

HISTORICAL DEVELOPMENT.

In the press reports bearing upon conditions in Russia since the outbreak of the revolution in March, 1917, little mention has been made of the tremendous changes that have shaken the entire educational system in that country. One needs only read Vyestnik Vremennavo Pravitelstva (Messenger of the Provisional Government), Russia's official gazette for the publication of the acts and decrees promulgated by the various ministries and other administrative bodies since the revolution, to become impressed with the deep and far-reaching reforms that have uprooted the entire system of the old education built on principles of autocracy and the privileges of the few. A school system of such a type could not exist in a country striving for democracy. This was realized by the Provisional Government headed by Prince Lvov and later on by Alexander Kerenski.[1]

To eradicate the evils of that system, to throw the schools open to the humble and the poor, to establish "a single absolutely secular school for all citizens," was the task at which the new authorities set to work.

In this report an attempt is made to indicate the outstanding features of the new laws and regulations since the early days of the revolution. Unfortunately because of the scarcity of material it is impossible to tell at present how far the acts and decrees promulgated by the various authorities and outlined in this report have been actually carried out. Nor is it possible to state with any degree of accuracy the educational changes that have taken place in Russia since the overthrow of Kerenski and the establishment of the Lenin-Trotski régime. For lack of information this report closes, therefore, with the early months of the Bolshevist rule.

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[1] The Provisional Government with Prince Lvov at its head was organized soon after the outbreak of the revolution in March, 1917, with the understanding that it should hold power only until the Constituent Assembly should meet to decide Russia's future form of rule. Its first cabinet consisted of former members of the executive committee of the Imperial Duma. In July of the same year a more radical cabinet was formed under the leadership of Kerenski. A few months later (i. e., in November) the Provisional Government was overthrown by the Councils of Workers, Soldiers, and Peasants Deputies, and the Soviet Government, with Lenin as Premier and Trotski as Minister of Foreign Affairs, was established instead.

The old autocracy, shattered so easily, left a heavy heritage. As is well known, education in Russia is very imperfectly developed. The policy of the czars was to impart to the people knowledge that would strengthen their own imperialistic aims. Nevertheless, it differed with each monarch. The reign of Czar Alexander I (1801–1825), especially its first half, was marked by an endeavor to build up a national system of education; his successor, Nicholas I (1825–1855) saw in the spread of schools and popular education a dangerous weapon against autocracy. The system by which schools of different grades formed one continuous ascending chain was destroyed and a high barrier was set up between the elementary and secondary grades.

Education was intended for the privileged classes only, and, although the school system was divided into four grades (parish school, district school, gymnasium, and university), leading from the primary school to the highest type of educational institution, no peasant's children, according to the Ukase issued in 1813 and reaffirmed in 1827, were to be admitted beyond the district school. A few years later even this privilege was denied them, and the tiller of the soil had to be content with the parish school only, though in Russia 85 per cent of the total population is rural.

The fourth Minister of Instruction, Shishkov, with the approval of Czar Alexander and in his presence, issued the following statement:

> Knowledge is useful only, when, like salt, it is used and offered in small measures according to the people's circumstances and their needs. * * * To teach the mass of people, or even the majority of them, how to read will bring more harm than good.[1]

This attitude was held by the higher authorities for a number of decades, and neither the abolition of serfdom in the sixties nor any subsequent reforms in Russian state affairs had any considerable effect upon educational conditions in that country.

The accession of Alexander II (1855–1881) was marked by an intellectual revival and freedom of speech, but his assassination plunged the country into a state of reaction. A number of schools came under the control of the church and were governed by the Holy Synod, Russia's highest ecclesiastical authority. The church authorities also opened a series of church schools, where the child spent his years in learning how to read church music and church Slavonic characters, the rôle of which in eastern Europe may be compared to the part played in the west by Latin. The inevitable cleavage between the secular public schools and the parochial church schools became wide and deep and the passing over of a pupil from a school of one type to that of another was attended with great difficulties.

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[1] Musin-Pushkin, Shkola v Rossii, p. 22.

With Nicholas II (1894–1917) came a general revival of interest in educational matters, especially during the years following the Russo-Japanese war. The second part of his reign was marked by an era of many pedagogical congresses, of various schemes for reforming the schools, of incessant attempts toward the improvement of the methods of teaching and the organization of schools of a new type. This revival, taken up by the zemstvos (rural councils) and numerous private agencies, did not succeeed, however, in bringing about complete reform. The most thoroughly democratic reforms, for which the progressive elements had been striving for decades, became effective in the early months of new Russia, and only the unfortunate internal strife of later days prevented their complete realization.

SECULARIZATION OF SCHOOLS.

One of the first acts of the Provisional Government of 1917 was the secularization of church schools, in order to put the educational institutions of the various departments under the control of the Ministry of Public Instruction. This important law, passed by the Provisional Government on June 20, 1917, reads in part:[1]

> For an actual and uniform realization of general instruction all the elementary schools, included in the school system, or all those which receive state grants for their upkeep or for the salaries of the personnel, among others, the church schools under the control of the Greek-Orthodox Church, as well as the church seminaries and two-class schools, are herewith transferred to the Department of Public Instruction.[2]

This reform, as can be easily seen, was primarily directed against the orthodox parish church schools, the separatist tendencies of which proved to be a serious obstacle in the diffusion of popular education. The parish church schools differed widely in program and spirit from the neighboring secular schools in the same district. They were under strict supervision of the clergy and had no connection with the zemstvo schools, which were under the jurisdiction of the Ministry of Public Instruction.

The general standard of instruction in the parish schools was reputed to be below that of the zemstvo schools. The zemstvo social workers long tried in vain to take over the parochial institutions. Measures of the Minister of Public Instruction, aiming to increase the general expenditures for secular education, were often defeated on the ground that no similar provision was made for the parochial schools. The latter, although governed by the church, enjoyed grants apportioned by the state, which in 1916 alone, according to the Russian

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[1] All the datesin this report are old style, Russian calendar.

[2] Vyestnik Vrem. Prav., 1917, No. 89.

Yearbook for that year, amounted to $11,076,383. The subsidy which the parochial schools received from the state in the end facilitated their final transfer from the domain of the church to that of the state and made possible their supervision by one central authority.

The final blow inflicted upon the ecclesiastical school authorities came from the Soviet of the People's Commissaries, which in its session of January 20, 1918, officially proclaimed the separation of church and school. The immediate effect of that measure was the elimination of the teaching of religion and theology in all the public schools and the doing away of all discrimination between pupils on religious grounds.[1]

ADMINISTRATION OF SCHOOLS.

PROVISIONAL GOVERNMENT.

The administrative machinery by which the state maintained its control over education has undergone radical changes. For the better understanding of these changes, a word as to school administration under the old system seems necessary.

Under the Czar's régime the entire state was divided into 15 educational districts, each headed by a curator. The curators, though nominated by the minister, had to be confirmed by the Czar. The power exercised by the curator within his own district was very large. It consisted not only in general supervision of all grades of schools, from the university downwards, but also the filling of vacancies in the ordinary staff of the schools. In addition, the curator had the right to nominate for confirmation by the minister persons fitted to discharge the functions of directors of secondary schools, and inspectors or deans of faculties in the universities.

The actual inspection of secondary schools was done by his assistants, the district inspectors, while the supervision of elementary education was exercised by the directors of elementary schools and their subordinates, the inspectors of elementary schools. Matters pertaining to reforms within the sphere of authority of the curator were decided by the curator's council, in which the district inspectors also participated.

Through this system of school administration all grades of education were brought into direct relation with the curator and through him with the Minister of Public Instruction. As a counterpart to the ministerial schools, organized and controlled by the state, stood the educational institutions, established and maintained by the municipalities and zemstvos in those provinces where local self-governments were in existence. Though originally enjoying great liberties, the zemstvo schools were gradually correlated to the ministerial schools by a system of provincial and district school councils, which consisted of representatives of the ministry and the local self-government.

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[1] New Russian News, 1918, No. 38.

The distinct feature of these councils was the active participation of the nobility who, encouraged by the state, played an important rôle in directing the policy of the schools. The inspectors of both the ministerial and zemstvo schools were looked upon with great disfavor by the zemstvo social workers, who considered these officials as state agents interested more in the teachers' loyalty toward the ruling autocracy than in the education of the masses. The profound hatred which the ministerial inspectors had aroused manifested itself at the first teachers' conference, held in Moscow, immediately after the downfall of the Czar. The cries there first heard openly of "Down with the hateful inspectors of the public schools, down with the council! The power of the school belongs to the teacher!"[1] augured ill for the system of school inspection, as hitherto practiced in Russia.

This dictatorship "from above" broke down completely with the coming to power of the Provisional Government. The policy of the new school authorities was to refer the administration of the schools to the local self-governing bodies, the zemstvos and the municipalities. The decree of May 8, 1917, regarding elementary education reads:

> In localities where the provincial or district zemstvos are in existence, the municipal, district, and provincial school councils are to be abolished. In place of the abolished councils the administration of elementary education is temporarily laid upon provincial or district zemstvos, while in cities with a municipal school council administration elementary education is given over to the municipal duma.[2]

By placing the educational affairs in the hands of the local authorities, the post of the curator became superfluous and was abolished by the decree of September 26, 1917. With it went, as a natural consequence, the Curator's Council and its autocratic machinery, the directorates and inspectorates of schools.[3]

Although the new Ministry of Public Instruction outlined a comprehensive and far-reaching program for the reconstruction of schools, it encountered powerful opposition on the part of the radical elements of Russian society. This was due to the old deeply rooted distrust of reforms emanating from governmental bureaus, where the people had hitherto no voice. The Workers', Soldiers', and Peasants' Deputies demanded the organization of a special State Committee of Public Instruction attached to the ministry and representative of the people. Organized in May, 1917, the State Commission of Public Instruction comprised representatives of the All-Russian Soviets of

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[1] Russkiya Vyedomosti, 1917, No. 76.

[2] Vyestnik Vospitaniya, 1917, No. 6-7.

[3] Vyestnik Vr. Prav., 1917, No. 178.

Workers' and Soldiers' Deputies, representatives from the union of towns, zemstvos, and various other organizations, mostly political. Educational workers were represented in a small minority. The function of this committee was to devise laws and see that these were laid before the Provisional Government through the channels of the ministry. The sessions of the state committee bore many fruits. Regulations were issued concerning elementary education,[1] the enforcement of compulsory education,[1] the administration of public schools, and the autonomy of the middle schools. The committee recommended also the introduction of the new spelling in public schools, higher salaries for elementary-school teachers, and various other reforms, general and particular.

The decision of the state committee with regard to administration rests on the principle, so familiar to us, that public education is the affair of the local self-governments, by which body it should be administered. For the immediate administration of schools there should be formed special provincial and district boards of public instruction. As to jurisdiction, according to the state committee, the local boards should care, among other things, for the general maintenance of laws and regulations pertaining to public education, the administration of educational institutions, the coordination of all activities pertaining to public education in a given area, and the collection of statistical data on education. In addition, each provincial zemstvo may distribute state grants for education to the various districts and towns according to the decisions of the Provincial Zemstvo Assemblies.[2]

The reforms mentioned above, whether outlined or actually introduced, represent, as can be easily seen, the general trend of democratization of schools, as found in other democratic countries. The action of the Provisional Government was not revolutionary. Local self-governments existed in Russia for over 50 years, and, by granting them a voice in educational affairs, the provisional authorities simply complied with the wishes of those who have in vain sought this privilege for the past five decades.

Autonomy of middle schools.—The projected reforms of the State Committee relating to the autonomy of middle schools received cordial support of the Minister of Public Instruction, Salazkin. A bill introduced in September, 1917, for the approval of the Provisional Government places the control of all schools above the primary grades in the hands of the Council of Education. According to this bill, "the immediate control of the higher elementary schools, boys' and girls' progymnasiums and gymnasiums, real schools, normal schools, and other institutions receiving State grants in full, or subsidized by local funds, be it for purely educational or for administrative purposes, is herewith intrusted to the Council of Education." This body is to comprise, besides the teaching personnel and the school physician, representatives of the local self-government and the parents' organizations, wherever such are in existence. The number of the parents' representatives in the Council of Education is not to exceed one-third of the members of the teaching personnel.

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[1] The details are not available.

[2] Vyestnik Vospitaniya, 1917, No. 6-7, pp. 25-35.

In institutions newly created the right to elect a director or other persons holding administrative positions is reserved to the provincial zemstvo boards or to the district or city boards, as the case may be.

The members of the Council of Education have the right to elect the teaching staff from the list of candidates submitted to it by the director or by some other person at the head of the institution. At the end of the school year, upon the written request of not less than one-third of the total number of members comprising the Council of Education, the teachers' tenure of office may be subjected to a new vote. In extreme cases of unsatisfactory conduct or lack of skill on the part of the teacher, such reballoting may take place even before the end of the school year.[1]

BOLSHEVIK RÉGIME.

With the overthrow of Kerenski in November, 1917, and the coming to power of the Bolsheviki, the educational policy was again revised. This time the control of schools passed from the hands of the zemstvos to those of the soviets, representing the masses only. The rules, as issued by the Commissariat of Education,[2] read as follows:

1. For the proper conduct of affairs pertaining to public education in and outside of school, also to normal schools (teachers' seminaries), there are being organized regional, provincial, municipal, district, and county soviets of public education attached to the soviets of workers', soldiers', and peasants' deputies. This refers to institutions with a general or technical bias.

2. The soviets of public education consist of (*a*) representatives of all organizations having the right to send delegates to the soviets of workers', soldiers', and peasants' deputies; (*b*) representatives of local educators and students (among others also from technical schools); (*c*) experts especially invited for consultation.

NOTE.—The total number of representatives from educators and students must not exceed one-third of the total membership of the soviet of public education.

3. General meetings of the soviets of public education take place, if advisable, once a month, but not less than once in three months.

4. The soviet of public education elects an executive committee from its own members.

5. All appropriations from the State treasury are to be solicited by the regional and provincial soviets of public education.

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[1] Vyestnik Vrem. Prav., 1917, No. 161.

[2] Under the Bolshevik régime the ministries were changed to commissariats, the post of the minister being superseded by a "people's commissary," appointed by the Central Executive Committee of All-Russian Assembly of Soviets.

6. The soviets of public education work under the direction of the soviets of deputies and in accord with the views of the latter institution. In respect to pedagogical and financial questions the soviets enjoy autonomy and are accountable to higher authorities in the following order: County soviet of public education, district soviet of public education, provincial soviet of public education, regional soviet of public education, and, finally, the State commission of education.

7. The opening of new schools and the sequestration of private educational institutions, in case the expenditures are covered by the State, are to be undertaken with the exclusive approval of the State commission through the channels of the soviets of public education.

8. The soviets of public education shall extend their activities to the people's universities, public courses, exhibitions, theaters, motion pictures, excursions, libraries, etc.

9. In localities where the zemstvos and municipalities have not yet ceased their activities the soviets will take charge of the work pertaining to public instruction. All school apparatus, municipal and rural, as well as all sources of income, will be transferred to the soviets.

10. The soviets of workers', soldiers', and peasants' deputies have the right to make only such changes as are compatible with local conditions.[1]

PARENTS' ASSOCIATIONS.

The rôle of parents' organization in the school council mentioned in the previous section is a recent development and sprang, like so many reforms in Russia, out of sheer necessity.

By the constant recasting of schedules in secondary schools the school authorities under the old régime curtailed the subjects most in touch with modern life. Natural sciences and history were reduced to a minimum and Greek and Latin studies reinforced. The teaching in the boys' and girls' gymnasiums became formal and unattractive.

Protests emanating from the intelligent circles of society became more and more emphatic, until dissatisfaction culminated in 1905 in a general strike not only in university institutions, a common phenomenon in Russia, but also among high-school pupils. The strike, spreading throughout the length and breadth of the Empire, made the authorities realize that to cope with the high-school problem a radical change in the system was imperative. It became clear to them that to win the pupils' confidence was beyond their power, and that to save the situation the parents' cooperation must be first invited.

The importance of the influence of parents in school life had been realized by the school authorities much earlier, notably in 1899, when the Minister of Public Instruction, Bogolyepov, bent upon carrying out reforms in the secondary schools of Russia, issued a circular addressed to the curators of the educational districts, admitting the justice of many complaints of the defects in the secondary schools.

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[1] Izv. Sov. Rab. i Sold. Deput., 1918, No. 37.

As a result of this admission a conference was summoned by P. A. Nekrasov, curator of the Moscow district, in which about 200 educators, mainly teachers and directors of secondary schools, took part and formulated recommendations which, timely as they were, did not procure the participation of parents in the affairs of the school. A closer rapprochement followed only a few years later, when the school youth, inspired by the liberalizing movements of 1905, began to revolt from the restriction of the school régime, causing great perturbation among the school authorities. It was then that the latter turned to the parents for help. Officially invited for the first time by the school authorities to lend a helping hand the parents literally "burst" into the schoolroom, and in the hour of distress rescued the situation.

With the slogan that the school should be a temple of knowledge, and not of politics, the parents' commitees set to work. Their influence was at once most beneficial. The pedagogical circles had extended to them their sympathies and won their cooperation. Owing to the influence of the parents' committee interest in the school studies was revived, the students appeased, and politics, at least outwardly, banished from the schoolroom. The parents' committees established cordial relations between teachers and pupils. Leaving no stone unturned, they responded to all the needs of the pupils' school life. In this they saw their right and duty.

By instituting special summer courses the parents' organizations assisted the backward students in subjects in which they had previously failed. They suggested to the school authorities that the home lessons be modified by furnishing exact tables relative to the home studies. They reported the progress their children made with the various textbooks; they obtained numerous editions of the same book, so as to enable the children to read and discuss in the classroom books familiar to all. They supplied school libraries with additional books, issued catalogues of the best books available, and distributed them for the guidance of parents in their own as well as in other localities. Their activities extended to the improvement of the pupils' entertainments and amusements. Last, but not least, they took an active interest in school luncheons and sanitation.

These activities, at first welcomed, received, with the setting in of the reactionary spirit in 1907, a decided check on the part of the school authorities, who viewed with suspicion the ever-growing influence of the parents' organizations.

With the outbreak of the revolution the parents' committees came again to their own. That the parents' cooperation in school affairs is valued highly is proved by the bill of September, 1917, which allotted to the parents of school children a conspicuous place in the council of educators.

ABOLITION OF RESTRICTIONS.

NATIONAL AND RELIGIOUS GROUPS.

Among the new measures introduced in Russia since the revolution the most vital one is the decree abolishing all restrictions hitherto imposed upon various nationalities, denominations, and creeds. For instance, Jews were formerly admitted to secondary schools and universities only by percentage. Their admission to schools within the so-called Jewish pale—that is, roughly speaking, Poland and southwestern Russia—was limited to 10 per cent, in other provincial universities to 5 per cent, and in Petrograd and Moscow to 2 per cent of the total enrollment of students. Furthermore, the non-Russian population in Provinces like Poland, Ukrainia, Lithuania, etc., once independent States, had to submit to the Russifying policy of the former Government and for lack of facilities to send their children to schools in which the use of their own native language was forbidden.

These conditions appear to have vanished with the "Declaration of the rights of the peoples," issued by the All-Russian Soviet, first in June and then in November, 1917. The tenets of this declaration are as follows:

1. The equality and sovereignty of the peoples of Russia.
2. The right of the peoples to free self-determination even to the point of separation and establishment of independent states.
3. Abolition of all racial and religious privileges and restrictions.
4. Free development of the nations and ethnographic groups which were merged into the Russian Empire.

From a pedagogical point of view the restrictions which prevented the various nations and ethnographic groups, constituting 57 per cent of the total population of Russia, from establishing and conducting their own private schools were forthwith removed. They were permitted to institute their own schools and use their national language as a medium of instruction.

It is also significant that the State itself made provisions for the introduction of the local language into normal schools of those provinces where the non-Russian population constituted the majority.[1]

PRIVATE INSTRUCTION.

Private instruction imparted at home was formerly considered an offense under some conditions and punished accordingly. The new bill introduced by the Minister of Public Instruction and ratified by the Provisional Government abolished all restrictions relative to private instruction and thus paved the way for private individuals eager to assist the Government in wiping out illiteracy.

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[1] Vyestnik Vremennavo Pravitelstva, 1917, No. 104.

Commenting upon this bill, the Vyestnik Vremennavo Pravitelstva, 1917, No. 79, states:

> According to the laws now in force it is the duty of the educational and administrative authorities to find out by observation what individuals practice the art of teaching children in private homes, if such persons possess the necessary certificate, otherwise to prosecute them according to the law. The articles of law pertaining to private instruction have at present, with the entire change of structure of society, lost their significance, while they still retain the force of law in the civil code. For this reason the Minister of Public Instruction has introduced for the approval of the Provisional Government a bill aiming to abolish all restrictions regarding teaching in private homes.

EDUCATIONAL LADDER.

The reorganization of the entire school system, long a dream of the most progressive elements of the Russian society, was effected by a decree issued by the Provisional Government in June, 1917.

According to the Russkiya Vyedomosti, 1917, No. 144, all State schools are to run in two parallel lines, cultural and vocational. Each grade leads directly to the next higher of the same line or to a corresponding grade of the parallel line. The pupils begin with the elementary school and pass then either to a lower vocational school or continue the general course by entering a higher elementary one, corresponding to the first four classes of the present gymnasium. The gymnasium is to undergo a gradual change and be reduced to a four-class school, whereby the first four classes of the present gymnasium are to be turned into a higher elementary school. With the higher elementary school the cycle of elementary education comes to an end.

From the higher elementary school the pupil passes to the secondary trade school or to the four-class gymnasium which is to correspond to the last four classes of the present gymnasium (5th–8th classes, inclusive). This cycle completes the pupil's secondary education.

Finally, the four-class gymnasium is to pave the way to the university or to a higher technical or professional school.

This act abolishes all barriers and offers free and uniform access to all grades of education. Moreover the school schedule is to be so arranged as to enable the pupils to change the academic for a vocational course and vice versa.

A similar reform with regard to the city schools received considerable attention on the part of the late Czar's liberal Minister of Instruction, Ignatyev, whose proposals for better schools were widely commended by the exponents of educational reform.

To make this change real the Provisional Government assigned the following sum for education in 1917 to supplement the budget fixed by the old authorities:

The sum of $2,707,857 "for the opening of four-class gymnasiums and real-schools,[1] new higher elementary schools, also for the opening and upkeep of teachers' institutes and normal schools.

Out of this sum it was proposed to spend:

(*a*) $546,750 for the opening of 100 four-class gymnasiums and real-schools.

(*b*) $1,291,725 for the opening of new higher elementary schools and for various needs of these schools, as provided by law.

(*c*) $110,000 for the opening and upkeep of 5 teachers' institutes.

(*d*) $759,382 for the opening of 25 normal schools.[2]

In this connection it may be of interest to compare the statistical items as far as available. They represent the state expenditures for middle schools in 1915 and 1916.[3]

	1915	1916
Boys' state middle schools	$9,514,430	$9,536,333
Boys' state-aided middle schools	587,210	668,410
Various other expenditures (regular salary increase, teachers' lodgings, parallel classes, etc.) in boys' gymnasiums, progymnasiums, and real-schools	3,360,768	3,682,500
Girls' state middle schools	289,445	293,633
Girls' state-aided middle schools	899,764	1,024,764
Total	14,651,617	15,205,640

The increase for middle education in 1916 was $554,023; in 1917, $3,039,662.

TEACHERS' TRAINING INSTITUTIONS.[4]

The reorganization of the elementary and higher schools, by which the present gymnasium is to be divided into a higher elementary and a high school institution, led the Minister of Public Instruction, Manuilov, to issue a new program affecting the status of Teachers' Training Institutions, which comprise the normal schools (uchitelskiya seminarii) and the teachers' institutes (uchitelskiye instituty).

(*a*) *Normal schools.*—The decree of June 14, 1917, defines the status of the normal schools, the main source for supplying teachers in the primary grades, as follows:

1. The normal schools are secondary institutions and consist of four classes. They admit men, women, or both.

2. The normal schools may have one or two preparatory or parallel classes.

3. Admission to the preparatory class is afforded to graduates of a two-class elementary school, while admission to the first class of a

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[1] The gymnasiums offer classical instruction, while the real-schools are nonclassical, with a technical bias.

[2] Vyestnik Vr. Pravitelstva, 1917, No. 101.

[3] Pravitelstvenny Vyestnik, 1917, No. 16.

[4] Vyestnik Vr. Pr., 1917, No. 104.

normal school requires graduation from a higher elementary school or its equivalent.

4. Candidates who pass a special entrance examination may also be accepted.

5. For practical work of the prospective teachers there is to be attached to the normal school a two-class elementary school, with a six-year course.

Further, the regulation requires all existing teachers' schools with an elementary program to be raised to the standard of normal schools. This change is to take place within two years from the date of publication of this regulation.

The teachers' schools were previously of low standard and their course differed little from the program of a two-class primary school.

(*b*) *Teachers' institutes.*—While the normal schools are intended to qualify candidates for the teaching profession in the lower elementary schools, the teachers' institutes prepare candidates to occupy positions in the higher elementary schools. The latter, as already explained, correspond in scope to the first four classes of the present gymnasium.

The following statements, issued by the Minister of Public Instruction, under date of June 14, 1917, show the new regulations, as affecting the teachers' institutes:

1. The teachers' institutes may admit men, women, or both.

2. Admission to the first class at the teachers' institute is granted to graduates of normal schools, boys' or girls' gymnasiums, real-schools with an additional class, higher commercial schools, and similar institutions. Admission is restricted to candidates who have been in the school service for not less than two years.

3. For the purpose of giving students practice in teaching there is to be attached to each institute a higher elementary school, teaching in which is required of all students.

4. The course of study in teachers' institutes covers three years and is divided into a general course—compulsory for all the students—and a special, corresponding to the group of subjects in which the candidate prefers to specialize. The special course consists of the following groups: Literary-historical, physico-mathematical, and scientific.

Students who have successfully completed a certain course in the teachers' institute receive the title of "Teacher in a Higher Elementary School" in a particular group of subjects. Admission to the examination for a license as such is afforded only to candidates who have taught school for at least two years.[1]

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[1] Vyestnik Vr. Pr., 1917, No. 123.

Requirements for candidates for university chairs.—A project which was worked out by the commission on the reorganization of higher education summoned by the assistant minister, Vernadski, in charge of higher education, states the following requirements for candidates for university chairs: (1) To become a regular ordinary or salaried professor the candidate must have had at least five years of experience as lecturer in one of the higher institutions of learning; to become an extraordinary or unsalaried professor only three years of experience. (2) Russian scientists, distinguished for their educational activities and possessing the degree of doctor of philosophy conferred by foreign universities, are also eligible to professorships.[1]

Docents.—The post of docent, instituted in 1863 and abolished in 1884, was reestablished by a ministerial circular of June 24, 1917. This reads:

> In all Russian State universities the post of docent shall be reestablished as follows:
>
> 1. Docents shall receive a salary of $1,200 per annum, with two increments of $175 each after the fifth and tenth years of service.
> 2. The assignment of docents to the various chairs is left to the faculty subject to confirmation by the university council.
> 3. Persons holding doctor's or master's degrees, or those not possessing such degrees but otherwise meeting the requirements of private docents and actually having had a three years' experience in teaching, are eligible to fill vacancies.
> 4. The election of docents, subject to confirmation by the council, is made by the faculty from the number of candidates proposed by its members.
> 5. Docents have a right to participate in faculty meetings with a voice on all subjects except that pertaining to the election of professors.

Admission of students.—The admission of students to higher educational institutions, until now restricted by various laws and regulations bearing upon the students' nationality, creed, and domicile, has undergone a sweeping change since the publication of the ministerial circular of June 13, 1917. How this measure affects nonorthodox and non-Russian students has been discussed in another connection. Here it may be of interest to mention the reform with regard to the students' domicile. As already stated, Russia was divided into 15 educational districts with a university in each of 10 of these. According to measures adopted by the ministry in 1899, students living in a district possessing a university could not freely select a higher institution outside their own educational border line. The new regulation does away with this law of bondage and leaves to the student a free choice between universities existing throughout Russia at large. Of particular interest are the following clauses of the circular:

> 1. The university admits on equal basis persons of both sexes with no distinction as to nationality and creed, providing such persons possess diplomas or certificates of maturity or the equivalent.

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[1] Vyestnik Vr. Pr., 1917, No. 161.

2. Students wishing to change the course of study and also those coming from other universities in or outside of Russia are admitted on the same basis as new students, credit for work done elsewhere being decided by the respective departments.

3. Special students, men and women, who possess a high-school education, may become regular students if they pass an examination for a certificate of maturity. In such cases credit may be granted for academic work done previously.

NEW UNIVERSITIES AND FACULTIES.

Plans to increase the number of universities and faculties, the lack of which has been keenly felt by the intelligent circles of society, came to fruition in the first year after the fall of the Empire.

The eagerness of certain cities to assist the Government in its work by offering large sums of money for the building of the proposed new universities, and the rapidity with which some of the reforms have been put into operation, prove that the time was fully ripe in Russia for measures so long delayed. But the credit for these reforms belongs not solely to the Provisional Government. Changes in university education were also planned by the prerevolutionary authorities. The March days of 1917 simply accelerated the course of events, and what under ordinary circumstances would have taken years, perhaps decades, to accomplish, was then done overnight.

The following are the most important measures: The Demidov Lyceum in Yaroslav, intended exclusively for the study of laws and organized on the same principle as the faculty of laws in a university, was transformed in July, 1917, into Yaroslav university and organically connected with the faculty of law. The medical, physico-mathematical, and historico-philological faculties were to be instituted at a later date.

Other changes created by the new authorities include the transforming of the Perm branch of the Petrograd university into an independent university institution, which opened last year with all the four faculties mentioned. In addition, the Warsaw university, which, in the early days of the German occupation of the western front in Russia, was transferred to Rostov-on-the-Don, underwent a radical change. The Warsaw university proper was abolished and in its stead was created the Don university, named after Rostov-on-the-Don, in which city it is situated. The Don university opened in July, 1917, with all the four faculties. The action of the authorities with regard to the Warsaw institution will become intelligible, if we bear in mind that the Warsaw university was intended to serve the needs of the Polish population. With the creation of the new Polish state, however, the Warsaw university in a Russian city had obviously no raison d'être and was supplanted by an institution definitely suited to its environment.

The two young Russian universities—one in Saratov and one in Tomsk—created shortly before the revolution by the then liberal minister Ignatyev, received considerable attention on the part of the new authorities. By an early act of the Provisional Government the Saratov university was expanded to include the physico-mathematical, historico-philological, and the law faculties, while to the Tomsk university were added the physico-mathematical and historico-philological faculties.

Plans were also underway for the opening of two more universities—one in Irkutsk and one in Tashkent—both intended to supply the needs of Asiatic Russia, which at present boasts of only one higher educational institution—the Tomsk university.

Finally, the stand taken by the new authorities with regard to the question of higher education for women deserves explanation. Women students, debarred from the pursuit of studies in universities, had formerly to content themselves with so-called "Higher courses for women" instituted in many university centers. These courses, general and professional, compared favorably with the kind of education offered at universities, yet graduation from these institutions did not carry the same prestige as graduation from a Russian university. This fact led the ministry to draft a law which aims to transform the higher courses for women in Petrograd and Moscow into regular universities for women. In addition to that, women may enter any higher educational institution on the same basis as men.

Reports from Russia bring advices that are anything but favorable for the development of higher institutions. Owing to the revolutionary upheaval many university professors, known for their adherence to the old régime, were summarily dismissed from their posts; others handed in their own resignations; classrooms were deserted by students serving in the militia and various political organizations; and university buildings were utilized for the propagation of the new ideas. Add to this the need of professors felt in Russian universities long before the war; the lack of material required for the proper equipment of laboratories and clinics; the high cost of textbooks and various apparatus; and last, but not least, the general chaotic conditions of the whole country. Says the Novoye Vremya, under date of September 29, 1917:

> A series of new universities is being opened in great haste. It is difficult at present to furnish new universities with indispensable textbooks and libraries, and there is no way of securing professors. Long before the war the university chairs were only half filled.

The Provisional Government is responsible for the changes in higher education which have been mentioned. Enlightened as these measures were, they did not, however, satisfy the Bolshevik leaders, who, as can be seen from the new university statute, seem to be anxious to throw the university doors open to all, regardless of attainments. The statute was prepared by a special commission, consisting of Profs. Steinberg, Pokrovski, Artemyev, Fedorovski, Reussner, and Magirovski.

THE NEW UNIVERSITY STATUTE.[1]

1. The universities are divided into three free associations: (*a*) The fundamental, (*b*) the educational, and (*c*) the cultural.

(*a*) The fundamental association aims to promote the theoretical work of its members in the field of learning. (*b*) The educational association is a higher school, which by means of instruction imparts an all-round education in an entire field of knowledge or one of its special branches. It consists of permanent students, instructors, and professors. To the class of permanent students belong persons who have passed the midterm examinations. The instructors are chosen by the faculty for the duration of three years on the basis of a competitive procedure. They must have an established reputation in the world of science or be known for their pedagogical activities. (*c*) The cultural association (university extension) will comprise a unit with the aim of informing the working people how to acquire knowledge in a concise and intelligible form; it will also prepare workers for the people's universities, and furnish direct assistance to all cultural and educational agencies. The higher people's schoo) admit all persons above 16 years of age, with no distinction as to sex and nationality.

2. The university must not be a class institution; hence, it must be free and admit all who seek higher education.

3. The new statute excludes any possibility of turning the members of the university into a privileged class. For this reason there have been instituted temporary positions only, constant competitions for professors and instructors, compulsory lectures by professors in public auditoriums, the assignment of professors to provincial universities.

4. The number of chairs and faculties in each university is reserved to the decision of the university association.

TECHNICAL EDUCATION.

Technical education received considerable thought on the part of the prerevolutionary minister, Ignatyev, who saw in it a means "to make the world more comfortable." His attention was mainly centered on the higher technical institutions which were to provide the State with trained experts for the promotion of the industrial development of the country.

The Provisional Government, while realizing the importance of higher technical schools, was of the opinion that to attain the best results a fundamental and radical change was imperative, and with that in view made sweeping changes in the field of elementary and secondary technical education.

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[1] Izv. Vser. Tzent. Kom. Sovietov, 1918, No. 94.

To begin with, it changed the section dealing with industrial schools under the Ministry of Instruction,[1] into a department of professional education.

It further issued a decree by which all professional institutions were to be divided, according to grades, into three groups: (1) Technical institutes (tekhnicheskiya uchilishcha); (2) trade institutes (remeslennyya uchilishcha); and (3) trade schools (remeslennyya shkoly).

The technical institutes, as stated in the new regulations, should aim at providing the students with a thorough knowledge, theoretical and practical, in some special field of industry; the trade institutes were to offer to students courses in applied sciences coupled with practical work, while the trade schools had as their aim the preparation of students to perform work in some special branch of industry in an intelligent and competent manner.

The course of study in technical institutes was to cover four years, in trade institutes not less than three years, while in trade schools it was to vary according to the needs of the particular branch of industry.

Admission to technical institutes, according to the decree, depends on the completion of the course of higher elementary schools, to trade institutes of a two-class elementary school, while admission to a trade school requires only graduation from a one-class elementary school. The technical schools admit boys and girls.

Degrees.—The completion of the course of a technical institute qualifies the student for the title of technician, which carries the right to execute work designed by an engineer, while graduation from a trade institute or a trade school leads to the title of master, or assistant master, respectively. Successful practice in his specialty for the period of not less than three years entitles the technician to a degree of engineer with the right to produce original work in his field. At the same time, under similar conditions, masters may become raised to the rank of master technicians, while assistant masters may become masters. These titles may be bestowed on the aspirants by the council of education of the respective schools, from which the students were graduated.

In addition to the above-named graded schools, the Provisional Government made provision for the opening of various courses in special branches of industrial education.

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[1] A number of technical schools lie outside the jurisdiction of the Minister of Instruction, but as changes in both kinds of schools do not differ materially they are treated here collectively.

Courses, permanent or temporary, for teachers who could be used in the various technical schools were also planned by the educational authorities.

By the same decree provision was also made to assign once in three years instructors of special branches to various factories and industrial plants with the view of putting them in touch with the latest developments in the industrial world.

The cost of the technical schools and courses was to be defrayed by revenues from the treasury, the zemstvos, municipal, and other bodies. A considerable amount of money for scholarships was also assigned for students desirous of pursuing technical or industrial careers. To cover the expenses entailed by the reform act in 1917, the Government assigned for technical education an extra sum of one and a half million dollars in addition to the amount named for the same purpose by the pre-revolutionary authorities.[1]

As an actual effect of the decree regarding technical schools in Russia it is interesting to note the opening in Moscow of the first technical institution of a new type with a four-year course. Commenting upon this fact, the Vyestnik Vremennavo Pravitelstva, 1917, No. 92, adds:

> With the permission of the Minister of Public Instruction, and in accordance with the new law regarding technical institutions, there has recently been opened in Moscow the first technical institution which aims to give the student a theoretical and practical education indispensable for directing the work in architectural, engineering, hydrotechnical, mechanical, or electrotechnical lines. Graduates of the technical institutions will have the same rights as engineers in any of the above-mentioned specialties who have completed a course in technical institutions in Western Europe.

In line with the reforms pertaining to technical education of the lower and intermediary grades is the progress made in 1917 in the field of higher technical education. Among the new institutions should be mentioned the establishment of two polytechnic institutes, one in Tiflis, Caucasus, and one in Nizhni-Novgorod, the former with agricultural, chemical, hydromechanical, and economic faculties, and the latter with chemical, mechanical, structural, and mining faculties.

The establishment of the polytechnic institute in Nizhni-Novgorod is the result of the transfer of the Warsaw polytechnic institute, which at the beginning of the German occupation of Poland was moved farther east to the first-named city. The same political reasons that prompted the transfer of the Warsaw university also led to the transfer of the Warsaw polytechnic institute.[2] In addition, plans were also made for the establishment of a new higher technical institution in Tzaritzyn, an important city in the lower Volga region.

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[1] Vyestnik Vr. Pr., 1917, No. 77.

[2] Both the university and the polytechnic were reopened afterwards in Warsaw.

Another proposal recommended by the new school authorities is the establishment of technical departments in connection with universities. The advocates of this measure are of opinion that this arrangement will eliminate waste in the equipment of laboratories which may be used in common by students pursuing technical and purely scientific studies, and in avoiding duplication of professors. The newly projected universities, Irkutsk and Tashkent, which the Provisional Government was planning to open, were to have technical divisions. Had this proposition been adopted Russia would have entered upon a scheme materially different from the one now in existence, by which university courses are divided into four groups—law, medicine, physico-mathematical sciences, history and philology.

ADULT EDUCATION.

Press reports from Russia show that the need of education has at no time been so poignantly felt by the masses as at present, when the old order of things has crumbled, when the whole nation has been drawn into the vortex of politics, and when the call for a new organization of life has been sounded from every street corner and public platform. The people, anxious for the printed and spoken word, crowd the auditoriums and lecture halls and demand pamphlets and books from libraries, unfortunately poorly equipped with the very kind of literature that could throw light on the burning questions of the day. The dearth of popular literature, coupled with the lack of properly organized lectures, makes the ignorant masses an easy prey of agitators, who in their zeal to convert the people to their own political views sow doctrines that bring only chaos to the already muddled head of the Russian muzhik. Soon after the revolution in March, 1917, the school authorities, fully aware of the need of training facilities for the adult population, took immediate steps toward its realization.

One of the fruits of this decision was the calling of a conference in September, 1917, with the view of devising a program for the most advantageous expenditures of the State subsidies. This conference, presided over by the assistant minister, Countess Panin, long known for her activities among the working classes in Russia, recommended, among other things, the following course of action:

The opening of primary schools (shkoly gramoty), where adults could learn to read and write, the opening of elementary schools with a general program, and the establishment of schools suited particularly to the needs of the rural population.

In addition, the conference advised the organization of courses for social workers in the various fields of adult education, as well as for the zemstvo leaders. It also emphasized the need of numerous special courses, such as agronomy, industrial and economic cooperation, bookkeeping, etc. Finally, the conference made a strong plea for the extension of the system of the public libraries, which it recommended should be supplied with proper literature suitable for the understanding of the masses.[1]

How far these proposed measures were accepted and to what extent they were put into practice by the proper school authorities is impossible to state because of the scarcity of news that could throw light on the situation. One thing is certain, however. The provisional authorities, as well as the succeeding Lenin-Trotzky régime, emphasized the vital need of schools for adults in the general scheme of education.

A. V. Lunacharski, the People's Commissary of Public Instruction, thus pictures the situation in an address directed to the Russian people:

> Everywhere in Russia, not only among the city workingmen, but also among the peasants, there has arisen a strong desire for education. Innumerable are the workers' and soldiers' organizations of that nature. To meet the demands of the mass of the people, to uplift them, and to clear the way for them are the first duties of a revolutionary and people's government.[2]

Apart from the Provisional Government's intention to establish facilities for the education of the adults, it is interesting to note that the more intelligent circles of society tendered their help and took up the matter of providing special schools for that very purpose. So, for instance, in March, 1917, the municipality of Nizhni-Novgorod, one of the important cities of the Volga region with a large working population, assigned for a people's university the sum of $50,000, while private contributions for the same purpose amounted to $400,000. Many other cities show a similar record in adult education.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 38

EDUCATION IN SWITZERLAND
1916-1918

By

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BUREAU OF EDUCATION

[Advance sheets from the Biennial Survey of Education
1916-1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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SWITZERLAND.

By PETER H. PEARSON,

Division of Foreign Educational System, Bureau of Education.

GENERAL CONDITIONS AND CHARACTERISTICS.

Switzerland has an area of only a little over 15,900 square miles, a population of about three and one-half millions, but 25 distinct political units—Cantons—each virtually autonomous in the control of its schools. There is no Federal educational board to issue plans, decrees, letters, or special instruction tending to unify the system. Under this freedom of development the schools have assumed their character in accordance with the language, religion, race, industries, and historical traditions that prevail in the several Cantons. The resulting variety in organization and methods makes it impossible to give a general account of the schools equally applicable to all parts of the country; hence, features that may be regarded as fairly typical will be sketched from reports coming from specific localities, as Bern, Basel, or Zürich.

The Federal regulations that the Cantons have in common provide for obligatory attendance, free tuition, and, to some extent, free instruction material during a period designated by each Canton, optional attendance at instruction in religion, participation in required gymnastics, uniform entrance examination for students of medicine. The Federal Union also contributes to the support of all primary schools; it prohibits the employment of children of school age in the factories; and, finally, it imposes a uniform educational test on the recruits that each year enroll for service.

The annual recruit examinations have a decided educational significance. On a fixed day of the year, after the young man reaches his nineteenth birthday, he is required to report to the office of his home Canton, where he is examined by a board of health, a board on gymnastics and physicial training, and an educational board. In gymnastics the examination consists of lifting, running, and jumping. In reading the requirement is correct enunciation and emphasis, with satisfactory reproduction of a selection as regards content; in composition a theme is required, correct, or almost so, in arrangement and details of form; in arithmetic the four elements, with integral numbers and fractions, the metric system, proportion, percentage, and interest, are included; the test comprises also the history, geography, and constitution of Switzerland. The outcome of this examination will determine whether the man is to be accepted for immediate service in a military unit or whether he is to be assigned for special service, including attendance at a school, to remedy the inadequacies revealed in the examination. The final result is published by the statistical bureau automatically assigning to each Canton the rank held by its schools, with the consequent suggestion for competitive endeavor.

Though it has been objected that the procedure is not a satisfactory touchstone whereby to ascertain the comparative standing of the Cantons, for communal ambition may be tempted to establish circumscribed courses narrowly adapted with a view to the tests, yet some positive advantages are undeniable. It brings all young men together on the same plane of personal worth and human equality, disregarding the distinctions by which they had become segregated—shopkeeper and assistant, teacher and pupil, minister and layman, capitalist and peasant. Again, each commune has thereby been spurred on to see that its compulsory attendance laws were strictly enforced, and also that voluntary as well as obligatory continuation schools were established. The examinations are, moreover, conducted under circumstances adapted strongly to impress each young man with the sense of personal responsibility. To acquit himself well intellectually at the time he enrolls under the colors and takes the oath of service is in itself a distinction; to fail and to be placed under instruction for delinquents is here closely connected with failure in duty to one's country.

In regard to the diversity among the schools, it is apparent mainly in the outer form and organization. The obligatory period varies between six and eight years, but Cantons with the shorter period have generally a form of compensation in obligatory continuation schools of from two to three years. The latter, again, differ with respect to courses given and the general trend of their work. In some communes they supplement the instruction of the folkschools by carrying the subjects of these to fuller completion; in others, new subjects are taken up with the purpose of preparing pupils for the trades. Even within the same Canton local individuality asserts itself by departure from the cantonal type program. For example, an hour-and-subject schedule was adopted in Zürich in 1912 to continue in force seven years, but some communes in the Canton adopted different schedules which were supposed to be in closer accord with their own civic needs and with the psychology of their pupils. The hours of the day and the free afternoons—generally two each week—and also the vacation periods were variously distributed. This departure from the official type, accepting the official program as suggestive rather than prescriptive, is a distinctive mark of the progressive trend throughout the country.

The age of admission and the length of term fixed for the infant schools differ considerably, the German Cantons receiving children at a later age than the French. The period comprised in the primary school varies a good deal, ranging from six to nine years; the period of the higher grade schools (Secundarschulen) varies from two to five years. In consequence these continue from the fourth, fifth, or sixth year of the primary. The concluding years of the latter run parallel with the beginning years of the former, giving rise to a duplication which, as in Basel, it is attempted to obviate by consolidating the two into one school unit. The communes exercise great freedom in deciding how the preparatory work shall be done, how to supplement the work of the folkschool, whether by schools continuing in trades and specialties or by those straight in the line of progress toward the gymnasium and the university.

The middle schools comprise a number of institutions variously named as gymnasia, colleges, teachers' training schools, girls' high schools, technical schools, agricultural schools. They do not fix any one year as the time of conjunction with the higher grade schools. The one characteristic they have in common is that they prepare their pupils for the university and hence usually retain them until the time for admission, i. e., to the age of 18 or 19. An instance of their diversity is seen in the gymnasium at Basel, which has an eight-year course, receiving pupils at the age of 10 and permitting them to enter directly from the primary, without attendance at a higher grade school. At Berne the course is eight and one-half years; at Zürich pupils enter at the age of 12 and continue for six and one-half years; the technical school at Zürich has a course of four and one-half years, receiving pupils at 14 or 15 and continuing from the second or third year of the higher-grade school.[1]

The flexibility in the scheme of articulation between school types of different degrees of advancement is due to the fact that the schools articulate from the bottom up. The local needs of separate cantons, with diverse industries and educational aims, have given rise to schools varying in aims and length of periods, and with these the advanced institutions make such connection as they can.

Closely concerned with this interrelation is the problem of the uniform school (Einheitschule), which here has a significance different from that of other countries. Like those in most other countries of Europe, the Swiss educators recognize the importance of adjusting the general school plans so as to avoid divisions due to social cleavage, but they also call attention to other factors of the uniform school which in the general discussion are often obscured. Two conditions in the life of a child, both complicated by the social status of its parents, call for adaptation of the general school plans: (1) The demand which requires a definite course of training for a chosen calling—commercial, trade, industrial, or professional; (2) the selection of a calling according to the child's endowments. The Swiss believe that the child's endowments should first be ascertained and then its calling chosen, but in the deliberations among European educators the latter consideration mainly has been heeded. In dealing with the social aspects of the problem the political advancement of the country helps to eliminate such handicap as may depend upon the status of a pupil in society.

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[1] From Special Report to the Ecclesiastical and Educational Department of Norway.

Even a cursory view of the school system reveals a close interaction between the schools and society. Society has demanded that every individual be given the amplest opportunity; that the schools encourage individual initiative, that they teach cooperative effort, that they deal with the industries, and, in general, that they show how each individual pupil can be fitted for the best service. How the schools have responded can be seen in what Switzerland has achieved.

PRACTICAL TREND OF THE SCHOOL WORK.

Touching the welfare of pupils, communal endeavor in Switzerland has created means for taking care of their health from earliest infancy, for seeing to it that they have the proper nourishment and clothing, for founding institutions adapted to the needs of pupils specially endowed or specially hampered. Again, this country has put into legislative form advanced ideas of a social and political character, like federal ownership of railways, socialized control of city improvements, banks, and industries, and, most significant of all, a constitutional proviso that Government enactments shall be referred to the voters for adoption or rejection. Aside from the contributions of these measures to the happiness and sterling character of the people, certain material ones more easily measurable may be mentioned. It appears to be a fact that:

> Switzerland, with no harbors, no coal, no iron, no copper, with high wages for manual labor, with agriculture inadequate to home needs, has succeeded in becoming, per capita, the next most industrialized nation of Europe, surpassing both England and Germany.[1]

In attempting to indicate at least a part of the share the schools have in the intellectual as well as material advancement of Switzerland, it appears that teachers have spontaneously put into practice the ancient maxim, "We study not for the schools, but for life," and that they are impressed with the importance of adapting their work to life conditions. When the health or the future of their pupils so demands, they have been able to move beyond the régime of books, lessons, and traditional programs and to guide their pupils in such other activities as are more closely concerned with their welfare. They are aware that the years of a child's plasticity is the time to discover and to insist on remedial treatment of such physical or psychical defects as may adhere to it from birth, and they appear conscientiously to include this among their duties.

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[1] Special communication from Dr. Herbert Haveland Field, Zürich, Switzerland.

The general system of the schools exemplifies the principle that education is a gradual process, with imperceptible beginnings and without abrupt finality. The service, therefore, that the school renders upon the first admission of a child is not of an instructional character; it assumes this character only after a transition period usually taken up by the child's own self-imposed activities. The nursery school takes care of the child, first of all, as assistance to a crowded home or a home in the distress of poverty, permitting the mother, who is probably a wage earner, to leave her child in safe hands while she is at work during the day. When a child is presented for admission a thorough medical examination is made, and if treatment is required it is given.

Among the institutions for the care of young children, the crèche, which is nearly always private, receives children of almost any age up to 3 years, at which time they may enter the infant school. The infant school has two divisions, namely, from 2½ years of age to 6, and from 6 to 7, the latter division preparing them to enter the primary school. From the first the child finds himself in a congenial environment in the school garden with its play equipment; there is no restraint as to regularity of hours, nothing giving rise to the feeling that in the interest of the school the young pupil is cut off for a certain time from hôme and parents. When the instructional stage is reached, there are kindly teachers to take him in hand, to see that he learns the correct pronunciation of words and that he acquires good personal habits. So far as expedient the child is left to himself in his first efforts to think, to observe, to understand, and to judge; he is permitted to drift into school tasks without the notion of compulsion; hence he does not come to feel that he is controlled by a rigorous taskmaster.

The first form of instruction assumes the nature of entertaining stories with talks of a practical tinge that furnish whatever nucleus there is in the early teaching. The opportunity for advancement is preserved in the recurrent periods of promotion, usually at the end of the year, though in case of the pupil's sickness they may come at the close of the first semester following the year in which the promotion would naturally have occurred.

This class of schools shows a tendency to increasing use of Froebelian methods. The original idea of assistance to the home and of a place of refuge offering a favorable environment is retained without any modification. To their success it is essential that unselfish people be placed in charge, who may anticipate the needs of the children and keep in close touch with their homes.

Just as the system permits the infant gradually to enter the instruction stages of the schools, it permits the young man or woman gradually to enter on the duties of a vocation while still remaining under the guidance of the schools. This principle is realized in most Cantons by the obligatory continuation schools. These are founded by the communes and by them brought to an accepted standard with regard to buildings and equipment in order to receive State aid. They are of two classes, schools for reviewing and supplementing the general school branches and schools mainly for training in the vocations and the trades.

In most Cantons the compulsory attendance for boys ceases with the completion of the fifteenth year, though in others, like Obwalden and Wallis, it is from 6 to 12 months longer; yet even these have a proviso permitting boys to discontinue at 15 by passing a special examination. In certain localities there is an obligatory continuation school of two or three years for girls, where instruction is given in manual work for girls and in household economy.

In most continuation schools is embodied an idea of the Grundtvig institutions of Denmark, namely, that of an intermission after the compulsory period by which time is provided for the pupil to recover from a species of classroom fatigue by which he is then handicapped; a year or two is permitted to lapse before the continuation; the pupil then takes up the work not only with better vigor, but with clearer conception of educational aims.

The brevity of time in the programs of these schools does not permit comprehensive curricula nor exhaustive study of any of the branches. Hence, only the subjects pertaining to practical and civic life are taken up. As a rule these schools admit only young men, though in some Cantons, as in those of Zürich and Bern, they are coeducational. As nearly all lead to such practical vocations and industries as pertain to the localities in which they are established, they show a strong tendency to specialize in the direction of the trades, in agriculture, horticulture, or commerce. In the Cantons of Fribourg and Thurgau there are household schools for girls; in the former the required attendance is two years, which may be extended to three years if the pupils' progress has not been satisfactory.[1]

The continuation schools specializing in the vocations and the trades are often conducted in accordance with a schedule that permits the pupil to be both wage earner and pupil at the same time. The schoolroom and the workshop function in close cooperation. To be properly matriculated the pupil must have secured regular employment in the trade which he makes his chief study. The employer is closely identified with the school; he not only instructs the pupil, but he also looks after his interest as wage earner; he has a definite understanding with the school authorities about the courses and the time the apprentice pupil may reasonably spend at school. The time the pupil is to remain at the work he has begun, together with other particulars calculated to insure his attendance to duty, are embodied in a contract which the pupil is required to sign. The session is held almost exclusively in the winter, with from 6 to 12 hours so grouped as to fall upon two or three forenoons each week. The flexibility of the general system adapts itself to varying local conditions, and the instruction often extends throughout the year. The schools thus specialize in individual directions so that they fall into groups, each of which is characterized by the needs of its general patronage. It would be a mistake to suppose that the dominant endeavor is to impart peculiar technical skill merely to fit the pupil to be an acceptable wage earner. Ethical and humanitarian subjects are always included, to ennoble the work of whatever kind it may be by educational ideals and associations.

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[1] Substance from the Report of Prof. Nesberth.

A view of the plans and methods prevailing in the teachers' training schools will show that their work is ordered in strict accordance with the one principle of anticipating what the pupils are to do later on in life. In the apportionment of the time between the academic and the professional subjects, those training directly for the teacher's future duties are given the greater prominence. Realizing the need of a review of the general branches, and yet the danger of allowing too much time for this, the regulations concerning it are so framed as to effect a carefully balanced compromise without unnecessary restrictions. The statutes of Zürich order that the future work of the teacher shall determine the allotment of time to each subject, as well as the character of the instruction; they also specify that the instruction in all branches shall be such that it may serve the pupil as an example in his future school work. To secure conformity to these regulations those who conduct the recitations are required to make thorough preparation for every lesson and to keep a book in which the plan of each lesson is preserved. Instruction material, textbooks, plans, programs, and apparatus are fully discussed, so that the prospective teacher becomes familiar with them, and reaches an estimate of their value for his future work. The training is conducted with regard to the twofold capacity of a good teacher: As a master of the details of his subject organically combined and, again, as the instructor specialist who has the skill to fashion the subject matter for presentation before the class.

The official guides and study programs anticipate in their outlines the practical work of the pupil after his school days. The instruction plan for the Canton of St. Gall sets up as a chief principle that instruction in fact should predominate. In grammar, for example, there is to be less theory than practice; this book should, in fact, be only a guide to the correct use of the language in speech and writing, an aid in composition. The outlines direct the pupil to write on what he has seen or heard or experienced, and hence really understood. Description is to be not simply a list of the characteristics of an object, but it is to be brought into living relation to nature and to man. In history the events of one's country should be seen as related to what takes place about one's home. In the geography of particular localities and countries careful attention is to be given to the life of the people of these places, their work, and arrangements peculiar to their life and calling. In natural history the pupil is to be led to see why the object under inspection has the peculiarities he discovers and how well it is adapted to its mode of existence, what relations of reciprocity it holds to other beings, what value it has for man, and how man accordingly is under obligation to protect it or destroy it.

The report of Prof. Neuberth, of Christiania, supplying details of observations in the classrooms of Swiss schools, gives a glimpse of the actual work of teachers thus trained. He says:

> There was a quiet orderliness in all the activities of the pupils, no trace of indifference, no slovenliness, but evidence of painstaking care and of close cooperation between pupil and teacher. Some, to be sure, would fall below the good marks, but there was no real, and certainly, no general delinquency. The instructor was gifted with particular skill in framing his questions, a matter regarded of such importance that it is pointed out in the statutes of Zürich as the special mark of a good teacher. The questions invariably compelled the pupils to think; instead of furnishing the form for the pupil's answer, they left him to do this for himself. The teachers had, it appeared, carefully weighed and judged both the content and form of their questions, appearing to be indefatigable in training themselves to get their questions stated right. * * * The answers, which were given with very satisfactory readiness, often gave rise to new questions on the part of the teacher and, what was particularly noticeable, also on the part of the pupil. Though the deliberateness seen may be criticized for its dry outline character and for the absence of those spontaneous details that vitalize a lesson, the landmarks through the lesson were certainly charted and established, giving a chance to fill in with appropriate illustrative matter.

The practical life issues of the teaching have, as would be expected, a large share in the deliberations of teachers at their professional meetings. During its session of September 30, 1918, the Zürich Teachers' Association discussed contemplated changes in the higher-grade classes and the courses to be given in these. As the suggested rearrangements involved time allotment to various subjects, the accepted or alleged values of these were again fully considered. It was evident that the world events and the recent experience of Switzerland made the teachers, even more than formerly, insist on positive answers to questions of a subject's value to the pupil after his years at school. The propositions for the discussion of the classics were formulated with regard to these considerations:

1. What significance does the culture of the ancients have for our own time?
2. Does the instruction at our gymnasia correspond with this significance?
3. Can not the same goal be reached in other ways, and, if so, what adaptation would it entail on the gymnasia of the future?

Early in the discussion it was insisted that Latin, to maintain itself, must show that it leads to undoubted present-day values. Since the war, it was urged, important developments have taken place in the industrial and social life, with new social phases, outlook, and ideals—the position of the individual in the State, the place of woman as a member of the Commonwealth, the principle of the family unit, the international position of the State—time must be found to master and to organize new masses of details to prepare the pupil for the place he is now to take. Hence the question,

> Can Latin be dropped as an obligatory study and the time thereby gained given to modern subjects, and can the study of the ancients be extended by reading good translations? Time should be found for psychology which, as it is now being developed, moves close to everyday activities; we constantly come into psychic relations with other people creating perplexing situations and problems. Outside of the schools the pupil is left slowly, painfully, and wastefully to acquire the psychology which the schools could more conveniently give him.[1]

On the other hand it was held that the western world has been influenced by the old classic world for centuries, and hence no matter how high it might tower above the old, its roots get their sustenance from the ancient soil. Our modern social organizations—state, church, school, society—are the result of a development in a straight line from the ancient world. If our present-day intellectual conditions are to be apprehended in their integrity and continuity of development, their origin and growth must be understood.

Earlier in this account the pupil's gradual release from lessons and entrance upon wage-earning employment has been mentioned as a feature in the school arrangements. The transition period thereby created gives opportunity for the teachers to render service to the pupils, no less important because it comes outside of the usual school programs. In a circular published January 1, 1916, and addressed by the school authorities of Zürich to the teachers of district schools, higher grade schools, and folkschools, is set forth the duty of teachers to help pupils to find employment suited to their aptitudes. The school boards and teachers have, accordingly, cooperated with the Bureau of Statistics to ascertain what callings were most sought by pupils after completing the period of required attendance. The information brought in showed what callings were most attractive to boys and girls, and also in what fields of endeavor their labor was most in demand. It was taken for granted that the teachers would understand that the prerequisites were bodily force and vitality, power of orderly and sustained thinking, congenial manners, resolution in will and deed, and strength of character. The teacher through personal experience understands the pupil's mental and physical capabilities, and is, in consequence, prepared as no one else to assist the parents in selecting his life work. He would reach an understanding with the parents, and perhaps take occasion to explain to them the moral as well as the industrial conditions depending on the choice, and the disadvantage of being without a trade or calling. If a choice is difficult to make, a pupil may, while yet at school, be guided in the general direction of a trade or one of the commercial lines. In performing this duty the teacher, it was pointed out, would often have a delicate task, for he might have to advise the choice of manual labor in cases where the parents would insist on something they regarded as higher as the calling for their children. If the economic conditions of the parents would permit the pupil to pass through only the primary school, or at most, two classes of the higher grade school, a calling consisting in the main of labor with the hands should not be looked upon as unsuitable, unless marked personal gifts pointed to something different. If, despite the statistical showing that clerical positions and offices are crowded by young applicants, a choice of this calling should seem wise, it becomes the teacher's duty to point out that success here depends especially on tact and personal address, readiness in the use of several languages, skill in figures, and the ability to write a neat and legible hand.

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[1] Adapted from Schweizerische Lehrerzeitung, February, 1919.

The circular of the Zürich school authorities also states that young men and women should be advised that a great many of their number—most of them insufficiently prepared—turn in the direction of a calling requiring scientific training. These people crowd the middle schools, and when they have painfully and at great sacrifice gone through the courses, they find no opening commensurate with their hopes. It is an especially responsible task to guide those that contemplate taking up the profession of teaching. The requisite endowments and possibilities are not always obvious at the age of 14 or 15. The high order of mental power, with responsive temperament and strength of character, is not always indicated by the marks pupils get as the result of examinations. The teacher should therefore be aware of his solemn duty to counteract the vanity of parents by aiding his pupils in a choice which saves both them and their parents from cruel disappointments. Again, he will have the more agreeable duty of encouraging the capable boy and girl whom he finds in his class to take up such scientific or professional lines as appear to be within their powers. In behalf of these he will have occasion to confer with the boards and officials that will come to have charge of the pupils in the branches selected. As the question of expense is also involved, the teacher's further service consists in helping the pupils to secure aid and stipends from such funds as are available.

As an outcome of these early suggestions, educators began to consider the feasibility of a compendium in which this kind of service could be outlined in a form suitable to be taken up as a part of the scheduled work of certain types of schools. With this in view the educational board of Zürich directed that a vocational guide book should be furnished pupils at nominal cost and be studied as an obligatory subject in the eighth primary class and in the first two classes of the higher grade schools and that it should also be adopted for general use in the third class of the higher grade school. Attention was called to the desirability of treating its content as instruction material. The teacher was enjoined to stress the importance of training for skill and attention to duty and to find occasion to give his pupils helpful words of counsel as they entered on their chosen life work. He was reminded that the pupil's choice of calling should not invariably be regarded as final; the main point was to help him earnestly to consider the choice.

The movement here mentioned, which was well under way in 1916, has since then assumed new phases, and a scope beyond what was originally contemplated. In the annual report of the educational board some of the results for 1917 are given.[1] In many districts and communities, says the report, boards for vocational consultation were established. The official school journal for March, 1917, published a comprehensive list of places where applicants might come for consultation. Many benevolent associations, among them the foundation "For Young People" (Für die Jugend) gave financial support to the cause. The expectation was that a general service bureau for the entire Canton would be established.

The Jugendwohlfahrt, Revue Suisse de Protection de la Jeunesse, under date of January, 1919, surveys in part what was accomplished during the years from 1916 to 1919.

The suggestions published by the school board led to cooperation between the schools and the associations mentioned above. They succeeded in getting 42 business places, factories, and other industrial plants made accessible to pupils who in company with their teachers desired to visit these to reach a clearer conception of the work there going on with the view of choosing a calling more intelligently. Similarly, they conferred with about 160 foremen of shops and trades to procure information for those pupils who expected to seek positions as apprentices. Every teacher instructing final or graduating classes of the primary and the higher grade schools was furnished with a list of available positions and also of places in the city where practice in the trades could be secured. The teachers were also furnished with a list of applications from farmers who wished to employ boys having completed the school requirements; also a record of places where girls could find employment. Through the agencies mentioned, the instructors kept in touch with about 140 educational officials throughout the Canton, thereby extending the work until the city of Zürich felt warranted in increasing the stipends and funds for promoting instruction in the trades.[1]

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[1] Jahresbericht der Direktion des Erziehungswesen über das züricherische Unterrechtswesen für 1917, Zürich, Switzerland.

As the importance of this form of school service became more extensively recognized, there was felt the need of organizing for its further prosecution. With this in view the occupational teachers of the Canton of Zürich, in the autumn of 1918, effected an organization of 200 members. The constitution adopted by this body sets up its purpose thus: (1) To guard and to further the material and ideal interests of the occupational teachers; (2) to promote the professional training of its members; (3) to cultivate right relations among the occupational schools, the folk schools, the trades, and industries; (4) to assist in procuring instruction material for the trade schools. The executive agencies of the association are to consist of permanent committees representing the various occupations. Their chief duty will be to further, in accordance with point 3, closer relations among the trades, the industries, and the schools.

REGARD FOR THE PUPILS' HEALTH.

In order to render the most complete service for life the responsibility of watching over the pupils' health has also been brought fully within the scope of the teachers' duties. Childhood is obviously the time when physical defects of whatever kind should be discovered and remedied. Each Canton has specific regulations touching the physical examination of the child upon entrance into the schools, the later periodical examinations, and reports of abnormal conditions discovered.

The school laws and published regulations show that the physician intrusted with this work must himself pass a rigid qualifying test. He must hold the practicing physician's license as required by the Federal Union. Employed by the department of education, he is not permitted individual practice. When the school board deals with questions of hygiene or sanitation, he may be summoned as an advisory member. His professional duties with regard to the schools and the pupils are minute and definite. In the Canton of Solothurn these include the examination of each individual pupil and inspection of every schoolhouse in towns and country districts. He is to visit schools for women's work at least once a year and to make careful inspection of ventilation, heating, lighting, cleanliness, sewers, water supply, courts, gymnastic rooms, baths, pupils' benches, school furniture, school utensils, and sanitation material. The physician must have regular hours for consultation; he must pass on all requests for exemption from attendance at school based on reasons of health; he determines whether pupils should be placed in classes organized for defectives, and whether or not they are to be sent to children's sanitariums; moreover, he enters on a special record cases where pupils are to be under observation for some time and where they need particular consideration during the school work; at specified intervals he is to repeat the examination of eyes, ears, and teeth. Vaccination, disinfection, precautionary measures against communicable diseases, tuberculosis, and diseases of the scalp, attendance on pupils taken ill—these are matters to which the school physician must attend. He may, if he wishes, make his inspection at any time, even during school hours, though it is expected that he shall interfere with the recitation as little as possible. He is privileged to be present at recitations any time when this may help him to an insight into the pupils' state of health. Early in the spring of 1919 the school periodicals discussed the physical measurements of pupils with the view of studying a new type of school bench adapted to their health and comfort, an attempt in which the school physician evidently takes part. Other duties falling to him are to approve the plans for school buildings, to inspect the health certificates of men and women teachers, to teach them how to treat the defects they discover in the speech and voices of their pupils, how to deal with children suffering from nervous trouble, and, finally, to lecture to teachers and parents on topics of hygiene. During the influenza epidemic pupils generally attempted to get back to school before complete recovery; hence they were in danger of incurring bad after effects. The school physicians adopted the regulation that no pupil should be permitted to return until the seventh day after complete recovery.

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[1] Adapted from Jugendwohlfahrt, January, 1919, and Jahresbericht der Direktion des rziehumgswesens, Zürich, 1918.

Various institutions having both curative and instructional purposes are found throughout Switzerland. Some of these are trade schools adapted to the capabilities of certain classes of defectives; but in all these institutions the instruction is subordinated to the restoration of the pupils' health. They often have the character of vacation colonies, where pupils under the supervision of their teachers may come to recuperate. They are by no means limited to the poor, but well-to-do parents realize the benefits there received and send their children to these places in increasing numbers.

One of this class is the forest school, where recitations are held in the open under the trees. The first one was founded through communal initiative in Lausanne in 1908; in 1912 and 1913 two similar schools were founded in the Canton of Geneva through private endeavor; later one was established in Neuenburg, and in 1914 another in the Canton of Zürich. Their origin grew out of the needs of children with weak constitutions, to whom fresh air and nourishing food are the essentials. The location selected is in the edge of the forest; the period for the sessions is from May till late in September.

In El Monitor de la Educacion Comun an account is given of another achievement of Swiss educational and medical endeavor, namely, a sun school, where certain classes of pupils in poor health may do a limited amount of school work while they are receiving the benefits of the curative properties of the sun's rays. A school of this kind has been conducted summer and winter for 12 years at Leysin. The restoration to full usefulness under the treatment here provided is more remarkable in the case of children than in the case of adults, for the reason, undoubtedly, that the former can more readily comply with the necessary restrictions in regard to work. The location selected for these schools is at a high altitude, sometimes as high as 1,100 meters above sea level. The largest school has a farm completely equipped, under an experienced agronomist, himself a cured patient, where agriculture, dairying, and bee and fowl keeping are carried on. In so far as the treatment is adapted to the cure of tuberculosis, all lessons are subordinated to this purpose, the only mention of school proper being as one of the divisions of time among hours assigned to exercises for respiratory development, walks, and light agricultural or garden work.

In his account the author shows how the mental training goes hand in hand with the physical. No special place is designated for recitations, the covered galleries adjoining the chalets being generally utilized. A small, portable seat with writing desk attached, the frame higher than usual and requiring an upright posture, is furnished each pupil. When the weather is fine the class and the teacher roam in search of the most attractive place for recitations—it is the movable school par excellence. In addition to the lessons assigned, the teacher gives instruction on some theme arising out of the local topography, geology, botany, etc.

From the ethical point of view the effect upon the child is most happy. From the first there is an evident growth in evenness of temper and stability of character, effects appearing as a consequence of the physical hardening.

The writer in El Monitor advocates the extension and adaptation of the best features above mentioned to the general public-school system. He does not attempt to prescribe the exact method by which this may be done, but he is confident that it can be worked out anywhere by a study of local conditions. Various instances of its realization are cited, as in Bern, Basel, and Geneva, where children from some of the public schools receive open-air instruction. In Lausanne, under the auspices of the city authorities, experiments in such instruction have been made with children selected by the physicians. Various cities of neighboring Cantons have organized advanced classes for further experiments. Objections on the score of expense are easily met, as the latter are obviously light, the necessary equipment being of the very simplest.

The Swiss journals and official reports also speak of other arrangements, both for the therapeutic treatment of school children and for special training in usefulness for those whom medical care is not able fully to restore. Under the direction of the health department of Zürich, children who suffer from defects of speech or ailments of the vocal organs are taken in hand. This branch of the medical department is intended first of all to impart such knowledge and skill as will be of use to teachers having charge of pupils afflicted with troubles of the throat and the speech organs. Sessions for these purposes are held in the consultation rooms of the city clinics. Here teachers may receive such medical knowledge as will fit them to discover and relieve the less serious cases that they find in their classes and also to see the importance of promptly referring troublesome cases to the specialists. As instructors, they are taught what to do with pupils that stutter or speak with an unnatural nasal tone, to understand the troubles at the bottom of recurrent or chronic hoarseness, as well as partial or incipient stages of deafness. The diagnosis which the teacher is prepared to make will be the first step toward a course of corrective treatment.

Again, unless the teacher understands troubles like these, he may classify an apparently backward child as below normal mentality, when the trouble is due to difficulties in the organs of speech or hearing.

Teachers in Zürich and Basel having charge of pupils of defective hearing explain the handicap under which these get an education. Many things at school and at home pass by them without leaving a trace. To restore these, so far as possible, to full communion with the outer world and thereby give their lives greater fullness is a worthy endeavor for the schools. It may be added that the knowledge requisite for this kind of service is in essentials also the foundation for elementary language instruction at schools with normal children, at least when it is a question of raising the instruction from a purely mechanical method to one based on a knowledge of the speech organs.[1]

The Swiss school authorities are giving due attention to those pupils who suffer under some species of more or less marked psychic disturbance, which makes the usual school arrangements unsuited for their progress or recovery. Among the symptoms pointing to such cases are absent-mindedness, sudden rage, depression, unnatural activity of the imagination, delusions, and disturbed sleep. These young sufferers are obviously entitled to treatment such as their conditions require, which can be given only in school homes especially suited for them. Here they could be treated pathologically according to a plan adapted to each; the children could be segregated into groups to prevent harmful influences of one individual or class by another. These ideas are in part carried out in some of the cantonal schools, were special care is given to children of nervous temperament. Dr. Frank, of Zürich, advises that—

> Parents of such children should be visited and thereby a clew obtained to a correct diagnosis of their troubles. The teacher himself should not presume to play the part of a pathologist, for he might thereby do great harm, but he should train himself to detect these not uncommon instances of slight nervous disturbance. Sometimes a quiet word from the teacher will help to remove the slight psychic obstruction; in other cases the trouble is to be referred to the specialist before the damage becomes too great.

Dr. Frank adds that offenses committed by these children should be dealt with in a manner different, usually gentler, from those of others. The experiences reported from such homes in Germany make it plain that a rather long period is necessary to effect a cure, though even a stay of five or six weeks has been beneficial.

For those that can not be fully healed the teachers try to find work that comes within their powers. "This endeavor has not only an economic but a moral and ethical side, for it will help to keep these less fortunate people from feeling that they are a burden." An attempt to realize this purpose was made in Basel in 1917 by opening a little trade school for subnormal children.

> At first it was known as the Weaver's Shop, but it was by no means intended to be limited to the occupation implied in the name. Aid from the Canton and from private donors enabled the originators to carry the plan further. The teachers in charge found that sewing, stitching, covering cushions, and to some extent weaving could very well be done by subnormal pupils. The results were, in fact, so encouraging as to warrant the extension of the idea by opening a school at Stapfelberg for subnormal girls. Since then funds have been secured from other sources, so that it is now contemplated to extend the scope of the endeavor by organizing rural homes where children of this class may become familiar with farm work and thereby be placed in the way of gaining their subsistence.[2]

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[1] Adapted from articles in Die Jugend, January and February, 1919.

[2] From Jugendwohlfahrt, February, 1919.

Movements of this kind have been accelerated by the war, and some new arrangements formerly regarded as of doubtful expediency have been put into practice. From the Canton of Aargau, for instance, several measures taken by the schools are reported that may be regarded as typical of what the schools are doing elsewhere—greater attention to exceptional, criminally inclined, or unhealthy children; increase in the facilities for free lunch and free clothing; more thorough health supervision; improved sanitary conditions of schools and pupils' dormitories; reduction of the number of pupils in a class; conference on the choice of work, together with plans for free instruction of pupil apprentices; furnishing of writing and instruction material free of charge; remittance of tuition in the district schools; increase in the number of stipends for pupils; establishing courses in commerce adapted for girls and manual work for boys; greater freedom in the change, election, and omission of subjects; increase in the efficiency of agencies to secure employment for pupils; reduction, under certain conditions, of the obligatory school period.

In immediate connection with the programs of all schools, there is a marked tendency to investigate the value of work done at the home as compared with that done in the classroom. With the aid of experimental psychology, teachers have reached the conclusion (reported mainly in Schweizerische Lehrerzeitung for Feb. 23, 1918) that:

> The work done at school was generally superior to that done by an isolated pupil at home as home work. In copying and figuring at home it was materially less than it should be in comparison with the same kind done at school. Qualitatively the comparison was also favorable to the school. As over against this, the experiments showed that in the case of certain pupils who were permitted to work quietly at home the work was better than that done in the class. In proportion as higher spiritual qualities entered into it, the assignment (imagination, judgment, presentation, literary style) done at home was better; in proportion as it involved the character of a memory performance, into which little of the pupil's personality entered, the classroom work was better.

Among other conclusions reached was that the pupil, if permitted to select his own time for doing the assignment, would often choose hours unsuited to mental work, such as the time immediately after a meal. As the pupil grows more mature, with clearer realization of his responsibility, the home work becomes more satisfactory. It is obviously the duty of the school authorities to see to it that pupils do not become overburdened by assignments to be done at home. When home work is necessary, it may indeed serve as a link between the home and the school because the parents would be under obligation to see to it that the children have the necessary time for the home assignment.

EXTENSION OF SCHOOL ACTIVITIES DUE TO THE WAR.

One of the first effects of the war on the schools in Switzerland, as elsewhere, was to furnish an incentive to break through the fixedness of the school programs and to respond to the immediate emergencies created. Occasions arose for extending the work of the schools in directions that had been thought to lie entirely beyond their province. The justification of these departures became topics for deliberations by school councils, leading inevitably to a new survey of the usefulness and timeliness of the various branches of the curricula. A new outlook tending to take as its viewpoint the very fundamentals in education began to prevail. If this wholesome disturbance of the educational régime comes to crystallize into any new principle of teaching, its characterizing features will be a more direct regard for the health and the entire career of a pupil, whether such regard can best be observed by the aid of books and lessons or in some other way. The pupil's life interests will be more fully paramount; and the programs of schools will be fashioned toward these ends, no matter how they may come to deviate from the school traditions.

The possibility of suspending the school routine for the sake of greater interests first appeared in the form of an endeavor to help relieve the economic stress the war created. As the Swiss school publications report the early instruction for the guidance of teachers in conducting this relief work, and as later issues of the same publications give the actual achievement, it is possible to trace these endeavors through some of their stages. The Commission on Industrial Information in its report advises that those who have charge of placing city pupils as helpers should always have regard to the spontaneous willingness of the pupils to enter upon this kind of service. Of the two usual modes of making the labor of pupils available for agricultural productiveness, namely, as assistants during harvest and as independent tillers of gardens of their own, the latter is the more promising. To plant and produce crops of their own fosters a spirit of social responsibility and a sense of patriotic duty. Educationally, too, it has a superior value, for it is a form of experimentation in which the young agriculturist is spurred on to inform himself about the best method of tilling the plat allotted to him. It would be highly desirable, if city conditions would permit, to place school garden tillage on the program for the fifth and sixth years; even a further extension of it as a part of the curriculum would be advantageous if weather conditions would make it practicable to give it a fixed place on the daily schedule.

The school publications call attention to the considerations that determine the success of pupils assisting on the farms during the busy seasons. The experiences of city pupils on the farm have not always been satisfactory either to themselves or to the farmers. Usually the boys come with incorrect and distorted conceptions of country work, and are therefore cruelly disillusionized during the first days; and, again, the farmer does not always have a correct conception of the city pupils' feelings and outlook. In participating in the work of the country it is best for the pupils to be accompanied by teachers and responsible persons who see to it that the stay in the country becomes profitable to their charges as well as to the farmers.

There may not always be the needed accommodations, in which case the village schoolhouse could be used as a dormitory. Here the work group could be kept busy at some form of lesson during rainy days. The help should not be rendered gratis, but should be compensated by a wage; even though nominal, it would be an encouragement.

The substance of the above suggestions, taken from the published instructions to Swiss teachers, is supplemented by information telling of the actual endeavors to carry them into effect. Instances are cited of individual farmers who spoke highly of the efforts made by the city pupils to help, adding that some of them rendered very material aid in harvesting the rye. The pupils from a certain modern school exceeded the expectations placed upon them. One result of these experiments was that an organization of teachers at Basel determined on a plan for carrying them further by making them a permanent school endeavor. To that end they invited pupils—boys and girls—to take part. The press was asked to assist by urging the farmers to avail themselves of the pupil's help at the next harvest. To get the farmers themselves interested was regarded as most important.[1]

As the schools of Switzerland are closely identified in their work with the practical affairs of life, they were closely touched by the economic disturbances of the war. One immediate effect, already mentioned, was to organize for productiveness; another was the necessity for augmenting the salaries of teachers. Where the burden of this emergency increment should fall was at first a matter of uncertainty. The Federal Government looked for a solution which would make the increase 400 francs, instead of 600 as asked by the teachers, and apportion it equally between the Canton and the Commonwealth. Temporary increments were granted until 1919, when permanent salary improvements will undoubtedly be made, arrangements which appeared to be entirely satisfactory to the teachers. Despite the opportunities for more remunerative work, few teachers left their posts of duty for other employment.

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[1] Based on various issues of the Scluveizerische Lehrehrzweitung from Nov. 30, 1918, to Feb. 9, 1919.

Some dislocation of the work came about through the general economic stress. School boards received many applications from pupils for dismissal before the expiration of the required time, because the parents wished them released for remunerative employment. In the interests of both the pupils and the schools, these requests were granted only in cases of extreme urgency. Considerable interruption of the work took place, however. In the spring of 1919, for instance, the irregularity had become so extensive that many schools concluded the year's work without the usual semester examinations. Exercises of another kind were then substituted, but in no case did these have the character of tests. These arrangements were so much the more necessary as the influenza epidemic had, in many districts, compelled the schools to be closed for periods from weeks to months.

Increased opportunities for wage earners so diminished the school attendance in some districts as to make it difficult to maintain the school as usual. In the Canton of Zürich this led to the consolidation of several smaller districts, with the result of relieving somewhat the financial straits of each. In almost all these instances, the accounts state, the amalgamation, besides effecting a more equitable distribution of the school burdens, has been an advantage educationally. Hence there is a growing tendency to bring together a still larger number of school groups into consolidated institutions. The union of two schools is often effected by making one primary and the other of higher grade. Even districts and schools denominationally different from one another have in this way been satisfactorily brought together. In view of the ample supply of teachers the movement has not been in their interests, but its justification is upheld by a fairer distribution of the expenses, better equipment, better general instructional facilities, better utilization of the teaching force, a more ample supply of teaching material for each school. Again, it strengthens the community spirit and extends it into larger circles, widening the outlook by fuller sympathy with the people outside of the immediate circle.

Among the more permanent effects of the war is the desire to overcome the tardy processes of carrying out school reforms obviously needed. The procedure now in vogue in Switzerland and elsewhere is delayed by deliberations on petty objections until the needed legislation is postponed for years, by which time the social order has moved on toward new horizons.

An instance of how the usual delay can be overcome was presented when, in response to requirements arising out of altered conditions, vocational selection was brought into the courses. The same conditions also gave rise to a new inquiry into the educational significance of the manual labor that pupils and teachers voluntarily performed during the war. So favorably have educators been impressed with it that they are unwilling to take the backward step of having it discontinued, hence prompt enactments may be expected that will provide for its continuance and expansion. The direct practical aims that the schools set up insist on a corresponding directness on the part of the school authorities in making provisions for the new endeavors. The more independent of books the instruction becomes and the closer it draws to everyday life, the clearer becomes the necessity of a prompt response to the call for buildings to accommodate the new activities—suitably equipped rooms for girls' work, for boys' industrial courses, school exercises in chemistry and physics, pupils' lunch rooms, gymnastic rooms, playgrounds, and school gardens. Years ago some arrangements were begun for the cantonal and community control of supplies and instruction material. The plan was gradually adopted by the Cantons of Solothurn, Baselstadt, St. Gall, and Thurgau; they effected joint contracts with publishing houses to furnish books at prices which became lower through consolidated purchases. Other Cantons cautiously adopted the same plan, though modified in details. Recently some form of the general plan has been adopted by almost all the Cantons; traditional objections have been more easily overcome, and it is now recognized more fully than before that the movement toward a socialization of the schools in this way is in perfect accord with the democracy of the people of Switzerland.

The democratic trend of recent events is shown in the efforts to bring the problem of school inspection to a solution. When the schools of Switzerland became free from the church they came under the direction of secular inspectors who were governed by rules and directions which many teachers considered vexatious in their character. The argument that such State inspectorship is necessary to maintain uniformity among the schools is not regarded as valid by the Swiss teachers as a body. The defects, they argue, now remaining in the schools can be remedied at least as readily by the associated teachers as by the official inspectors. Through their associations, therefore, teachers are urging that the inspection be taken over by their own organization to relieve the schools from some of the features of the State inspectorship that are objectionable to them.

In the sessions of the school convention at Zürich in September, 1918, the political and social outlook created by the war obviously colored the educational deliberations. There was strong pressure in the direction of opening a still greater number of avenues toward practical work that could be taken up by pupils differently gifted. But the question of the manner in which the school organizations could best be adapted toward these ends gave rise to conflicting views. It was maintained that if an early segregation toward vocational aims be made possible, the selections could be made from fuller numbers and on a broader basis. The trades would thereby gain many pupils who under the present organization are encouraged to go on to the middle school, though they are able to follow its courses only in part. By an early choice of calling the crowded middle schools would be relieved from the influx of a great many pupils whom neither gifts nor aims justify in going on with higher studies.

On the other hand it was argued that an early departure in the direction of a chosen calling can not be made from the safe basis of sufficient data on the pupil's endowments and aptitudes. Such early choice is therefore likely to be influenced by the social and economic position of the parents. The children should be encouraged to travel the same school highway, so far as possible, under the same teachers doing the same work, subject to the same tests for segregation toward special lines. An obligatory folk school with a lower division of six classes, and with these an organically united division of two classes—the latter adapted toward specialization of studies—would safeguard all interests of pupils and of society. Here would be room for manual work, real productive labor, which all pupils would be required to take up. The prestige work would attain by its elevation in the schools to a plane with other subjects, and the mutual participation in it by the pupils, were regarded as the most efficient way in which the schools could combat the notions of caste. It is realized that when pupils get together in the manipulation of actual things for industrial, productive, and, as such, patriotic purposes, social demarcations and cleavage tend to become obliterated. Subjects having much to do with criticism and scholastic achievements are a more favorable field for the growth and maintenance of distinctions among classes. Within its organized outlines it was insisted there must be scope for types and school units to specialize in industrial direction and at the same time to preserve coordinated interaction. These aims lie in the direction of decentralization and differences in administrative regulations with the view of adapting the work to fit the pupil's calling and endowments and the wishes of his parents. In brief, the present complicated administrative system should be made simpler and more elastic, so that it can more readily respond to the expanding activities of the schools.

At a teachers' meeting in January, 1919, the discussion seemed to show that new conceptions are beginning to crystallize into definite and positive forms. While due regard will be given to the many new and useful activities that claim admission into the curricula, the teachers of Switzerland are not disposed to neglect the old and established branches. The fundamentals of the system have not been disturbed by the war. The classroom instruction will, hereafter as before, comprise reading, writing, figuring; it will train the memory and the judgment of children; it will give them constant practice in the analysis and the combination of thought processes. The schools will put forth their best endeavors to help lift the youth to a point above the narrow prejudice of egoism to sympathy with the world in which they live, out of limitations and seclusion, out of contempt for the concerns of the world, to a knowledge of actual life and to a participation in its struggles. Though there will be earnest attempts to remove the handicap which through birth or station may weigh upon a pupil, there will be no enthusiasm for the dead levels of mere equality. The social and educational values associated with manual labor as a required part of the school program will be fully recognized. In the future as in the past, there will be steady efforts made to attain results, material as well as spiritual; but the Swiss teachers will continue to bear in mind that they must compensate for the material things which must come from abroad by spiritual values within their own borders. The war has enhanced the fundamental values by stressing courage, energy, vitality, intelligence, and the love of freedom. In the interests of these values considerations of a merely scholastic character are, temporarily, at least, pushed into the background. The interaction of school units as a system will be subordinated to these ends.

The sessions at the January meeting stated that the school system must never be permitted to assume the character of a business department of the State, with mechanical functioning and consequent deterioration of its spiritual life. The schools must be relieved from routine, fixity of form, and officialdom. Lesson plans and methods should not impose a rigid scheme of instruction material to be mastered or memorized; the aim should rather be to adhere to whatever material or combination of material, or means, further the growth of the human intellect, and encourage its own early and spontaneous activity. Freedom, therefore, within the school régime is a dominant idea which recent events have made insistent. Human feeling begins loudly to protest against the thought that the most youthful, most original, and inherently most joyous period of life should be repressed by official formality.

Again, the teachers advocated Government aid for students, artisans, and teachers, to pass some time in travel to study their respective callings so as to attain a mastery of what was best in usages prevailing abroad. This was one of the most direct ways fully to utilize whatever resources their own country afforded, and thereby rise to a position where they could worthily and efficiently help to rehabilitate the countries devasted by the war.

While the teachers as an organization could advise in matters that the steady progress and the enlarged responsibilities of the schools now required, it remained for the Government to heed the full educational opportunities that the events of the past years had created. Switzerland occupies preeminently an international position, from which the harsher antipathies created by the war have been absent. According to a communication from Dr. Haveland Field, of Zürich, dated November 3, 1918, this would be an ideal location for a memorial educational institution from which sentiments of amity toward all peoples could radiate. Dr. Field calls attention to the aspirations which the Republic of Switzerland has in common with the Republic of the United States, making it especially appropriate for these two nations to take the initiative in the furtherance of this international idea.

A few educational movements that have gained a new significance by the war have been mentioned. Others now uppermost are: 1. The war has shown that woman can do some things formerly thought impossible to her. The schools will, therefore, adapt courses more fully to woman's intellectual and physical constitution and to the new possibilities brought within her sphere. 2. Teachers will cooperate more closely with the homes of the pupils. They will endeavor fully to enlist the sympathy of parents for the school work. 3. Democratization of the school control. 4. Decentralization of the working organism of the system. 5. Stipends to be made more generally available for talented pupils. 6. Endeavors to guide pupils to select occupations according to endowments. 7. The occupation of the teacher must be lifted above the influence of cliques. 8. Efforts to individualize the instruction. 9. Concentration of the instruction as studies and lessons. 10. Greater use of opportunities for exchange of teachers in foreign languages. 11. Exchange of abilities in city and country. 12. Coordinating manual labor with other studies of the curriculum.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 39

TRAINING LITTLE CHILDREN

SUGGESTIONS FOR PARENTS

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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INTRODUCTION.

The kindergarten propaganda work that has been conducted by the Bureau of Education and the National Kindergarten Association in cooperation during the past six years has brought about a more widespread interest in the subject of the educational value of the early years of childhood. This has been manifested not only by an increase in the number of kindergarten classes established, but also by an increasing demand for the series of articles on *Training Little Children*. These have been sent, upon request, to upward of 25,000 mothers, 1,500 home demonstration agents, 1,000 presidents of women's clubs, 1,000 kindergartners; also to 1,027 orphanages.

The articles were furnished by the National Kindergarten Association, and nearly all of them were prepared by mothers who were formerly kindergarten teachers. Based upon kindergarten principles, these articles contain valuable suggestions for helping untrained women solve the perplexing problems which constantly beset the busy, overworked mother in her home.

The articles were originally written for publication in newspapers and magazines, as it was felt that in this way a very large number of mothers could be reached. The results have been most gratifying, for the articles have appeared in the columns of daily and weekly papers in practically every large city in the country, as well as in those of many small towns and villages. The editors of more than 2,000 newspapers and magazines having a combined circulation of over 45,000,000 have requested them.

Notices have appeared in several large magazines that the Bureau of Education is furnishing a series of articles for parents, with the result that thousands of letters have been received from mothers showing an eager desire for help in dealing with all manner of difficult questions pertaining to the training of their little ones. Many of these letters disclose pathetic situations; for example, a father in Canada writes that he has been left with four motherless little children whose training "puzzles me"; a widow in Arizona writes that she is filling the place of both mother and father to her family of five; a mother of 17 children in Nebraska finds the articles so helpful that she is unwilling to act upon the printed suggestion that she pass them on to some other mother.

The large number of wretched beings in penal institutions and the inefficient persons seen in every walk of life bear silent witness to the need of better training for the Nation's little children, for only one in eight of whom kindergarten classes have been provided. Approximately 3,800,000 children between 4 and 6 years of age are still without this educational privilege to which all are entitled in this land whose fundamental principle is equality of opportunity. It is to make amends for this lack in the educational system, in so far as this may be done, that this home service to isolated mothers has been inaugurated.

More than 1,000,000 single articles have been circulated to date, and as the demand for them is constantly increasing it seems wise to present this material in more permanent form. This bulletin has therefore been compiled to meet the needs of parents.

BESSIE LOCKE,
Director of Kindergarten Extension.

TRAINING LITTLE CHILDREN.

SUGGESTIONS FOR PARENTS.

Article I.

WALKS AND TALKS AFFORD VALUABLE OPPORTUNITIES FOR TEACHING.

By Mrs. Bertha Emelin.

From about the age of 3, and extending indefinitely through childhood years, there is no more valuable aid for the mother who desires to promote the well-being of her children than walks and talks. It is usually most difficult for the home-keeping mother to find sufficient leisure—or rather, uninterrupted leisure—to concentrate on work or play with her children. We are all only too familiar with the interruptions of the butcher, the baker, the telephone, the friendly neighbor, which break in repeatedly until one gives up in despair. But when you leave your home and its distractions behind you, you begin to realize that you have found a way in which you can say with Froebel, "Come, let us live with our children."

These walks and talks can be useful both to the city mother and the country mother, though it will be easily seen that the country mother has the advantage in this respect. The city mother will have to substitute, for the suggestions below, the city parks, the river or lake front, visits to the large factories, museums, and historic points of interest. You can make the walks as long or as short as your leisure permits; you can plan them for every day or every other day, morning or afternoon; and after a month's trial you will begin to realize their value for yourself as much as for the children. The blue sky and the great outdoors will take you away from the pettiness of the thousand and one trifles that continually intrude themselves upon your attention while you remain within four walls, and they will be equally uplifting in taking the little ones away—especially is this true in small towns—from the petty small talk that emanates from the porches and the front stoops and passes along the sidewalks from house to house and from child to child.

It is well for you to decide upon your destination before you call the children with "Let's go to the pond to-day" or "This is a great day for the woods." A playmate or two taken along occasionally (and frequently if you have but one child) will lend additional zest to the walks and will enlarge your opportunities of getting better acquainted, not only with the playmates, but with your own children in relation to their playmates.

In the case of very young children, places very near home will serve as well as the more distant goals, which are usually more attractive to older children. The pond or the stream under the bridge, or the waterfront, the beach, or the rocky bowlders that can be scaled, or the woods—seek them out in your vicinity. Try every road and see where it leads to. The adjoining town, if it be within 2 or 3 miles, makes a splendid objective point with older children, and a trolley ride will bring you back should time or fatigue make it necessary.

Try to forget all your grown-up dignity on these walks, especially if it be a country road, and have as much fun and laughter as the children are ready for. Wear only stout shoes and "roughing" clothes. Sometimes permit the children to take skates, or a bicycle, or a velocipede, a wagon or jaunting cart, or a sled, a hoop, or horse reins. All these will provide additional attractions when the children seem loath to leave their street play.

These walks will develop your children physically fully as much as any systematic exercises, and the variety of "stunts" that will be initiated along the road will astound you. In some of them you may join; others will teach you to have control of your nerves, while the children develop strength and independence thereby. So far as the physical activities are concerned you need suggest very little; the children will initiate as much as there are time and energy for. There will be walking forward and backward, sometimes with eyes shut, sometimes on stone walls and in ditches; there will be running, skipping, hopping, jumping from different heights, whistling and singing, games of "follow master," racing, stone throwing and stick throwing into ponds and trees, and tree climbing.

That the "walks and talks" are a great mental stimulus is readily apparent when one reflects for a moment upon the opportunities for asking and answering questions that seldom arise in the schoolroom; the opportunities to observe public work that is going on away from one's immediate neighborhood; the road building, the digging of trenches and laying of mains, the setting and taking down of telegraph poles, the operation of the switch towers near the railroad bridge, the regulation of traffic, the construction of buildings. There is a deepening of sense impressions; there is training in the correct use of good English in conversations and story-telling by the wayside; there is reading and dramatization in the woods and in the shady nooks and on the rocky heights that aid so much in creating a congenial atmosphere for the play of the imagination, and last but not least—perhaps the most valuable feature—there is a tremendous field for developing a knowledge of nature's workshop.

Perhaps some concrete illustrations will serve to good purpose:

SENSE TRAINING.

Stand still a few moments with eyes shut; listen intently, then tell what was heard.

Look intently in all directions, close eyes, and tell what was seen.

Name objects (seeds, flowers, twigs, etc.) by touch alone with eyes shut.

Point to every bird's nest observed on the walk.

Find all the maple trees along one road. By taking one tree at a time you will soon be surprised to discover how many trees you and the children can name.

These walks will also contribute to spiritual growth in no small measure. They will afford a basis of companionship that with the older years is not readily outgrown, and many fond memories will cluster around these little trips. Perhaps the same walks, though less frequent in the adolescent years, may afford opportunity for the confidences, the ideals, and ambitions that are so often poured into someone else's ears because the mother seems so busy in the home. At any rate, you will not stop the walks and talks when the kindergarten age has passed. You will keep it up from year to year, and each year will make them seem more worth while. You will have to increase your knowledge of nature's story as the years go by, but with your interest to spur you on, and the many books on the library shelves that are now ready to help you, this ought not to be difficult nor burdensome.

Article II.

KINDERGARTEN ACTIVITIES PROVIDE PROFITABLE AMUSEMENT AT HOME.

By Mrs. Alice Wingate Frary.

The mother of small children who does not live within reach of a kindergarten need not feel compelled to deprive her little ones of the pleasures and benefits of systematic training. It is true that the stimulus of cooperative work and play, so vital a feature of the kindergarten, is not so apt to be found in the smaller group at home and is entirely lacking in the case of the only child. Nevertheless, many of the activities provided in kindergarten can be carried on not only by the small group but by the lonely child as well.

"Come, let us live with our children," is the old familiar Froebelian slogan. We might paraphrase it by saying, "Come, let us sing with our children!"

Why shouldn't children sing morning greetings to father and mother as well as to teacher? Even 2-year-olds that I know can sing them and delight in doing so. The good morning songs to various members of the family, to the new day, to sun or clouds, sung while dressing, do much to create a sunny morning atmosphere. There are songs to accompany many of the home duties, besides a wealth of nature songs. At bedtime the devotional spirit of the evening prayer may be enhanced by the singing of a child's hymn. Songs such as these can be found in "Games and Music of Froebel's Mother Play" and in other kindergarten songbooks. Any good library would have some of these, or it would be possible to buy copies through a bookstore.

A kindergarten calendar may easily be made at home. For this purpose a sheet of white cardboard is ruled off into a sufficient number of blank squares for the days of the month. The children mark the calendar each day with a suitable emblem. Yellow circles should be provided for sunny days and gray for cloudy. Tiny umbrellas denote rain; a gray circle partly covered with white indicates snow. Advertisements furnish pictures for special occasions—a little church, a toy, a birthday cake, a Christmas tree, etc. The particular emblem is less important to the children than the pleasure they take in attending to the calendar regularly, and the fact that they are being helped to a realization of divisions of time. The card should be large enough to allow for a suitable picture for the month to be mounted outside of the ruled portion. Landseer's "Squirrel and Pair of Nutcrackers" may be used for the October sheet; Correggio's "Holy Night" for December; Washington's or Lincoln's portrait for February.

Games train the senses at the same time that they afford keen pleasure. A mother can play many games with her child without interrupting her work. Dramatization is a wonderful stimulus to the imagination, and numberless stories lend themselves to this form of reproduction.

The kindergarten, aiming as it does to relate the limited world of the small person to the larger world about him, to quicken his appreciation of parents and all world workers, to deepen his wonder and reverence for natural phenomena, is much more than a mere place of amusement. The home can be made more than this also.

Article III.

RULES SHOULD BE FEW BUT POSITIVE.

By Mrs. Elvira Hyatt.

Modern ideas in regard to child training lay stress upon adhering from the beginning to certain set times for feeding, sleeping, bathing, and airing, for regular habits lay the foundation of moral teaching.

They are also a boon to the mother, resting her nerves and giving her time to herself, which in turn again acts to the benefit of the child.

After physical needs have been provided for, all the average normal child needs is to be let alone. Many babies are constantly overstimulated by mothers who adore them. It takes a wise and unselfish mother to keep her baby quiet systematically, and relegate him to a "warm, safe, happy background."

Physicians agree that infants under the age of 6 months should never be played with, or needlessly handled or caressed, and though it may be the dearest delight to rock and coddle the new infant and to watch his sweet ways, the wise mother will place him comfortably in crib or carriage and let him go to sleep by himself, preferably in the open air. Babies treated in this sane, unselfish fashion seldom cry except for some good reason. Self-control and self-reliance seem big words to apply to infant education, but these virtues have their foundation in earliest childhood. The child's wonderful, mysterious little personality must have time to develop itself, and growth and strength come "in the silence."

One of the first problems which confronts the mother is the unceasing activity of her small children. From the moment they can creep they are "doing something" every minute of the day. We simply can not bid these restless creatures keep still, for activity is the law of growth. Instead, we must learn to keep them busily and happily employed, and to substitute right activities for wrong ones. Constant repression makes a restless and unhappy child. We must learn to recognize abundant energy as good, and to turn it into right channels.

Bad and mischievous children are simply the results of negative methods. It is not enough to say "Run away and play," but a definite occupation should be suggested. The positive upbuilding method is to say "Do this" instead of "Don't do that," and if one form of employment must be taken away, something else should be suggested.

A recent Italian educator has declared that unnecessary restriction in a child's life is a crime. There must be rules, of course, and children must learn to obey, but much friction can be eliminated by avoiding unnecessary commands. There should be few rules, but these should be firmly adhered to. It is infinitely better not to give a command than to let a child evade it. The habit of teasing for a thing will never develop if this course is faithfully followed. Children brought up without rules or system are restless and unhappy; but, on the other hand, a blind obedience should not be insisted upon too long. The child can begin very early to reason for himself in small things. Later the moral fiber must be developed which will enable him to choose to do the right thing because it is right, and to recognize and obey the still, small voice within himself. A desire for right conduct must be awakened. The will does not begin to grow until a definite choice can be made. Strong wills are good, and a parent has no more right to break a child's will than to break his arm or leg. Be sure that your request is just, and whenever possible avoid a clash of wills. Forced obedience, of obedience gained through fear, weakens the child's will power and fosters cowardice and deceit.

Article IV.

DELIGHTFUL OCCUPATIONS DURING WALKS WITH CHILDREN.

By Mrs. Bertha Emelin.

Walks and talks foster a desire for wholesome recreation that can be enjoyed whether the purse is full or empty, that is of benefit physically, morally, and mentally, and that can be shared with others. On your walks point out the trees that make a strong appeal to the children; those that bear fruit, also the hickory and chestnut trees; the maples with their keys that fit so snugly on the nose; the oaks with their acorns that can be hollowed out and used as cups or pipes.

Collect milkweed pods and bittersweet with its bright berries to beautify the children's rooms. Pick wild flowers, each in its due season, spring beauty, violets, wild geranium, daisies, black-eyed Susans, and goldenrod, and you will soon be asked to tell why the bees hover over the flowers, and you will also watch the bees at work.

Keep your eyes open for cocoons in the fall; put them into a wide lantern chimney resting upon a saucer, the top covered with mosquito netting, and await developments. When the butterfly emerges the children will have had an experience more deeply impressed, because more intimate, than any classroom illustration. As the children grow older you will try different caterpillars in this same chimney device, and will watch the spinning of the cocoons or the transition into the chrysalis state. Sometimes the children's sharp eyes (usually sooner than your own) will discover eggs already laid on leaves, and you will watch them emerge into wriggling little bodies. One little girl was fortunate enough to see the eggs hatch about 10 minutes after she had gathered the leaf, and ever since she has kept her eyes open for another such "find." Frogs, toads. and tadpoles are sure to be noticed by the children, and will afford much interesting study if an aquarium can be provided for them at home.

Get acquainted with the birds. Begin in the late fall and winter when there are so few species that they can be easily learned and their notes readily distinguished—the woodpecker, the nuthatch, the chickadee, the junco, the English sparrow, and the white-throated sparrow. When these have become familiar the early spring birds will soon be added to the list—the robin, the grackle, the flicker, the meadow lark, the song sparrow, the bluebird. With these birds well known, the child will possess sufficient knowledge to discover others for himself, and he will find never-ending delight in greeting tho birds as the harbingers of the seasons.

The nests that are commonly seen—the chipping sparrow's in the hedges, the oriole's stocking hanging from the branch, the robin's well-shaped nest in the crotch of the tree, and the house-sparrow's careless untidy home—will soon be readily recognized.

DEVELOPMENT OF IMAGINATION.

On your walks retell stories read or heard, both you and the children participating in the telling. Invent stories, basing them on a beautiful sunset which you are witnessing, or on a cloud scene as the clouds shape themselves into varied forms, or on any other phase of the landscape which may attract you.

Repeat "Mother Goose" jingles as you go marching on; make up jingles yourself and get the youngsters to help. You will have great fun acting out some of your stories like "The Three Billy Goats Gruff," under a real bridge.

NUMBER-WORK PREPARATION.

Count your steps from one point to another up to 10 or 20 (with little ones only). Count forward and backward. Odd numbers, even numbers, simple multiplication tables, combinations in adding and subtracting, can be well drilled, especially during the colder weather, when one walks briskly and observation or loitering is impossible. Simple problems will be really enjoyed if you use names of playmates and stores and purchases with which the child is thoroughly familiar in his own experiences. Seeds and shells can be used for concrete work in simple adding, subtracting, etc.

At times you will encourage silent communion with nature, which in more mature years gives a "peace that passeth understanding." The children will readily accede to your request, "Let us all be quiet for a while," especially at the twilight hour when the sun's glory and radiance are still reflected in the west.

Moonlight walks, despite the disadvantage of exceeding the usual retiring hour, have no equal in imbuing children with a sense of the mystery and the power and the glory of the universe, and this experience should not be denied our children. They should be permitted this walk with the parents at least once each season, when the moon is full and seems to bathe not only the earth, but the innermost soul in soft, healing light.

Then, if you will add a few sunrise walks in the summertime, you will be certain of having stored up in your children and in yourself memories and delights that will remain forever.

Article V.

FROEBEL'S PHILOSOPHY HELPS THE MOTHER.

By Mrs. Louise Guldlin Simenson.

Every young mother should memorize a few of the songs and finger plays, and study the explanations, mottoes, and pictures in Froebel's "Mother Play," so that she may begin to use them in her home long before the kindergarten age. I have used them and find that they teach the virtues which later it is so hard to instill, for, as Froebel says, "Mother, you can now do with a touch as light as a feather what you can not later accomplish with the pressure of a hundredweight."

I have also found that the songs and plays fill the child's heart with joy and contentment, entertain him immensely, and supply his imagination with wholesome food. If the mother has memorized some of the songs, she can sing or croon them while busy about her household tasks, and in this way can often direct her child's thoughts and play with definite aims in view. Her walks or rides with the children may also be made occasions for such play.

To illustrate how Froebel's philosophy helps the mother to train her child, let us consider first the pat-a-cake play. You smile and say, "Why, all mothers play pat-a-cake with their babies; that is nothing new." Yes, mothers have played pat-a-cake for ages and ages, but if they want to know why they play it, let them turn to Froebel, who points out that the reason the little game is so widely known is because "Simple mother wit never fails to link the initial activities of the child with the every-day life about him." He also says:

> The bread or, better still, the little cake which the child likes so well, he receives from his mother; the mother in turn receives it from the baker. So far, so good. We have found two links in the great chain of life and service. Let us beware, however, of making the child feel that these links complete the chain. The baker can bake no cake if the miller grinds no meal; the miller can grind no meal if the farmer brings him no grain; the farmer can bring no grain if his field yields no crop; the field can yield no crop if the forces of nature fail to work together to produce it; the forces of nature could not conspire together were it not for the all-wise and beneficient Power who incites them to their predetermined ends.

It is because we mothers have felt perhaps dimly and unconsciously the lesson which the pat-a-cake play teaches of dependence on one another, and the gratitude each owes to all, that we have played this little game from ancient times.

THE VALUE OF PAT-A-CAKE.

I start to play pat-a-cake with my baby when he is 6 months old. It affords him great satisfaction to exercise his arms and to direct his movements so that both little dimpled hands meet together. When he is about 18 months or 2 years old I begin to show him the picture of pat-a-cake found in Froebel's "Mother Play." Through this means I gradually and easily lead him to see that "for his bread he owes thanks not only to his mother, to the baker, the miller, the farmer, but also and most of all to the Heavenly Father, who, through the instrumentality of dew and rain, sunshine and darkness, winter and summer, causes the earth to bring forth the grain."

It is only after having studied the picture thoroughly and read the chapter on pat-a-cake in the "Mottoes and Commentaries" and committed to memory the verses and tune in the "Songs and Music" of Froebel's "Mother Play," that I am ready to teach pat-a-cake to my baby; and, as I have shown, I do not teach it all at once, but refer to it again and again, perhaps when we are out working in the garden on a sunny day, or in the house watching the rain. When my child is old enough to be interested in such things, we go into a bakery shop, and to the astonishment of the baker ask if we may see his ovens. We often pass a mill, and I tell my child that this is the place where the farmer brings his grain. Thus the lesson of pat-a-cake goes on for a long time before it is first played in babyhood. It teaches us to be ever thankful, and baby learns to say "Thank you, dear mamma," "Thank you, dear baker," "Thank you, dear God."

There are many other songs and games in Froebel's "Mother Play" which I give to my children long before the kindergarten age. In all of these they take the greatest delight. I begin early to sing the songs and play the finger games which nourish the instinct of love for the members of the family and affection for animals.

THE FAMILY. MOTHER SONG FOR TEACHING AFFECTION.

This is the mother, so busy at home,
Who loves her dear children, whatever may come.
This is the father, so brave and so strong,
Who works for his family all the day long.
This is the brother, who'll soon be a man;
He helps his good mother as much as he can.
This is the sister, so gentle and mild,
Who plays that the dolly is her little child.
This is the baby, all dimpled and sweet;
How soft his wee hands and his chubby pink feet!
Father and mother and children so dear,
Together you see them, one family here.

—*Emilie Poulsson.*

The active child of 4 or 5 instinctively desires to measure himself against children of his own age, and if deprived of the opportunity to do this, loses much of what is necessary for his highest and best development. Through contact with each other children learn to wait their turn, and to be considerate in many other ways.

Moreover, the child wants to make things, and, although the mother can play little songs and games with him while carrying on her household tasks, she can not always take the time necessary to direct and assist the child in manual occupations. This is one reason why the kindergarten fills a great need. Association with playmates, work with various materials and tools and songs and games, are all provided in the kindergarten.

It was because of my study of Froebelian methods and their successful application to the child below 4, and because I realized how impossible it was for me, a busy mother, to meet the growing needs of my children that I wanted a kindergarten in our town, not only for my own little ones, but for all the boys and girls. A number of mothers and fathers became interested in my project; we petitioned our board of education and a kindergarten was soon established. It was a success from the very start.

Article VI.

MUTUAL RECOGNITION OF RIGHTS IS ESSENTIAL.

By Mrs. Charles R. Long.

What are the qualities that make a person "livable with," as we say?

Is not the fundamental one respect for our own rights and for the rights of others? And is not one side of the question as important as the other?

If my child must respect certain rights and privileges which belong to me as a parent, then I must respect rights and privileges that belong to him.

One of the first marked traits a child develops as soon as he is able to play with others is wanting to have things for his very own. He quickly learns the "mine" and "thine" of things and especially the "mine." It is my book, my rattle, my ball, and great is the uproar when he is requested to share his property rights with another. At this stage young mothers are often given to discouragement and make such remarks as "I do not know what I shall do with my boy. I fear he has an extremely selfish disposition. He refuses to let any other child so much as touch any of his playthings." But, wait, dear mother, remember that instincts are crude when they first appear and must be wisely and patiently trained.

Let us first respect the child's rights and say, "Yes, it is your ball, but won't you let your little friend play with it?"

By following this method we shall find the child becoming more and more aware of his playmate's as well as his own rights. He will share his favorite blocks with another not because some grown-up in authority says, "You must," but voluntarily because he respects the rights of another to share in his play. The idea does not formulate itself in his little mind in so many words perhaps, but it is the response that follows from instinctively recognizing that he is being given his due and that it pays to mete out like measure to another.

The general idea of the kindergarten is just that—the recognition of the child as an individual having rights, and of training this individuality, by allowing it to express itself voluntarily.

Of necessity this expression must be guided and guarded, so that the best qualities of self find the readiest expression. Children are quick to accept the standards of living that we are privileged to set them, quick to respond to the frown or the smile and slow to question where they are accustomed to receive justice.

At no time of life so much as in childhood is the opportunity given to bring out and establish traits of character that make for a sound manhood or womanhood.

One of the greatest opportunities within reach of all mothers is through the medium of story-telling. Stories interest children enormously, absorbing the entire attention for the time being. They establish a bond of mutual sympathy between the story-teller and the listener. They teach lessons of bravery, unselfishness, kindness, and a regard for truth, with no seeming effort in those directions. They also develop the imagination. When we stop to think that every invention we have, every great effort accomplished, was first developed in some individual mind through the aid of the imagination, we will do everything we can to foster this great power in our children.

Every child who has the opportunity of attending a well-organized kindergarten has a distinct advantage over one who is denied such an opportunity. While the kindergarten idea may to some extent be carried out by the mother in the home, much additional training is afforded the child by coming in contact with groups of children of similar age, and by spending two or three hours daily under the guidance of the trained worker, whose efforts are all aimed at developing what is brightest and best in his unfolding life.

Article VII.

LOVE WHAT YOU HAVE TO DO.

By Mrs. Mana Clark Jackson.

If I were a fairy godmother I would wave my wand and say to all mothers, "Love what you have to do." Children's wants are so numerous and a mother has such constant demands made upon her that she needs to retire within herself often and, no matter how tired she may feel, repeat again and again, "I love what I have to do." Then suddenly she will feel better, and it becomes easier to go on with the task of caring for and training the children. It pays in dollars and cents, as well as in peace of mind and satisfaction of spirit, to devote much thought toward starting the children right.

What are some of the simple ways in which we can help our little ones? Let us begin the day happily, no matter how we feel, and never be discouraged nor allow the children to become so. Together mothers and children can learn to be honest, obedient, and faithful.

It should not be forgotten that all virtues thrive best in a healthy body. Therefore, give the child plenty of fresh air, have him sleep in a well-ventilated room, wear clean, whole clothes, and eat simple food.

LET LITTLE ONES HELP AT HOME.

Let the children take hold and help about the house a little. At 4½ years old they can wash dishes, and they love to do so. An oilcloth apron will keep them dry. They can also help make beds, brush up crumbs, and do many other things. But we must not nag the children at their tasks, remembering that interest in useful work may be most successfully developed by keeping it in the realm of the play spirit.

We have churches and schools to help in our work with our children, but it comes back every time to the parents and the home to develop in the children the simple practices which lead to right and happy living.

We must be patient in answering questions; and if we do not always know the answer, let us try to find out with the children. Fun is as natural as breathing to most children. Try to laugh with them at their simple jokes.

Let us take a little time at the end of the day, if we can, to tell a short story. The quiet will do us all good. Perhaps we may have seen a bird, squirrel, or a child do some amusing thing as we glanced out of the window while at work. The wind may have been chasing the pretty leaves, or the sun playing hide and seek among the clouds. Stories are not all to be found in books. It is a big accomplishment to learn to do things in the child's way—things they like to do but which we have often denied them because we felt we didn't have time to be bothered.

If the little ones see that mother and father are trying to find something to love in all their trying tasks, before we know it the home will always be full of sunshine. If we have a fretful child to deal with, find out first if he is being properly nourished; then try telling him stories which will take his mind off himself.

Many children are often disagreeable because they haven't enough of the right things to do, such as games and songs, that provide activity and stimulate the mind and occupations that answer the child's need to be doing and making something.

A most important point for the mother to realize is the necessity of sticking to the lessons she needs to teach every single day until the right habits are permanently formed in her child.

No one can tell us exactly the things it is best to do with children. But if we begin to watch and think, read when we can, and exchange experiences with other mothers many suggestions will be found to meet our needs. Take a glimpse backward into your own childhood and many ideas will occur to you in that way. And through it all we will find that the children are helping to bring us up, too. Courage and joy prolong life, and we can well afford to stand and wait, feeling sure that if our motives have been right and we can find something to love even in the hard things of life, our little ones will see and know and will "rise up to call us blessed."

Article VIII.

BUILD UP VIRTUES AND FAULTS WILL DISAPPEAR.

By Mrs. Elvira Hyatt.

It pays to have high ideals for our children and to respect their individuality. Much can be accomplished by expecting children to be good, and by showing them that we trust them.

We should never call a child "bad," never wound his self-respect. This does not mean that his naughty actions should be "glossed over," but, as one wise educator has expressed it, we should realize that every fault is simply the absence of some virtue and we should try to build up that quality in which the child is deficient rather than condemn him for that which he has not.

Build up the virtues, and the faults will disappear. If a child is selfish, we should dwell on unselfishness; if the child is untidy, on neatness; if slow, on quickness; and we should always remember to praise even the slightest sign of the virtue we are working to cultivate. A child will try to live up to the thing for which he is praised.

"How quiet and helpful my little Peggy is to-day" will do more good than a dozen scoldings about noise and mischief.

Stories can be told to arouse and stimulate high ideals. Stories have a wonderful educational value and almost any lesson can be taught in story form. Tell stories about birds, trees, flowers, animals, great and good men, simple stories of home and family life, stories from history and from the Bible. The eager little minds are ready for anything you wish to give them, and if you are a natural story-teller great indeed is your opportunity. Ideals of right conduct, love of family and sympathy with every living thing can all be given through the right use of stories.

Much has been said and written about pre-natal influence, but volumes more are needed on post-natal influences. One of the first things a baby learns is to "smile back" at his mother, and in all his earliest years the child reflects the attitude of those around him. He imitates the things which he sees and hears, in order to understand them, and "As the twig is bent, the tree's inclined."

A true mother leads a consecrated life. She will always be absolutely truthful and will keep every promise made to her child. She will recognize the good in all things and will never speak ill of anyone in her child's presence. She will keep away all thoughts of fear, and will awaken a spirit of loving service toward others and a growing belief in the Power which is within himself, until at last he grows into a recognition of the universal love and goodness which underlie the whole life.

Article IX.

HOMEMADE SCRAPBOOKS THE MOST SATISFACTORY FOR LITTLE FOLK.

By Mrs. Jess Sweitzer Sheaffer.

We have been intensely interested in watching our little daughter with her first books. In addition to their educational value, they are a source of great pleasure and have grown to be her daily companions. When she was about 14 months old she was given her first book—a small linen one containing pictures of animals. These we would call by name as we pointed them out to her, and as they became familiar she would point them out herself. After she had learned to talk she could say the names also. Linen books containing pictures of objects in colors were next given the child and when she had become acquainted with these group pictures were added to the collection.

By counting the objects in the various groups—not over five at first—and by calling attention to their color, the child learned both number and color. Emilie Poulsson's book on "Finger Plays" is an enjoyable supplement to pictures of this kind.

We found simple, homemade, indestructible scrapbooks, most satisfactory and attractive. Anticipating the book stage, we had collected a number of colored pictures from magazines. For the leaves of these books we used brown paper muslin, cutting a number of pieces 12 by 24 inches, and, after laying them one on top of another, stitching them through the center, thus making a book 12 by 12 inches when closed. On the pages we mounted the pictures with paste.

One book contained pictures of fowls, turkeys, chickens, ducks, geese, guinea fowls, and some pigeon and crow pictures also. In another book we pasted pictures of four-legged domestic animals. Many of the pictures showed the family life of these in their natural surroundings. They proved most interesting, as the child's experience is confined almost exclusively to the family of which she is a member, and animal families naturally appeal to every child.

Our little girl is now nearly 2½ years old, and she has never tired of her scrapbooks. Through them she has become acquainted with the different animals and the sound made by each, and is able to connect the animals and their calls.

The number of books of this kind which would be of great educational value to the child is almost limitless. Birds, flowers, vegetables, trades, farming, and history might all be presented to the child in this form. As our little girl grows older we have planned books of harvesting pictures showing the various stages in the growth of wheat from the preparation of the soil, planting of the seed, and so on, until it passes through the hands of the miller and baker and finally reaches the child in the form of her daily bread.

Another interesting process is the building of the home from the trees to the finished product. This book will contain pictures of the forest, where the trees grow, the man felling the great trees, the horses and wagons which haul the trees to the sawmill, the cutting and planing of the boards, the train which transports them to the lumber yard, the boards piled high in the lumber yard, the carpenter at work putting the boards together, the house in the process of construction and lastly the finished home, and the family that lives in it. From these process books the child can be led to realize that it takes rain, sunshine, and warmth to make the trees and the grains grow, and that there are many people to thank for providing our simplest food and that, above all, God is the great source of everything.

"Mother Goose Rhymes" and the child's favorite, "The Night Before Christmas," are always welcome diversions, and after repeated readings the child is able to supply words, lines, and later whole verses, thus incidentally developing the memory.

With the exception of a few simple books which are really story-telling pictures, I would advocate the telling of stories rather than the reading of them to small children. The primary object of story-telling is to stimulate the imagination of the children, cultivate a taste for good literature, and guide them to the best books.

Article X.

TRAINING FOR MEMBERSHIP IN THE FAMILY CIRCLE.

By Mrs. V. Oma Grace Oliver.

Parents must not look down upon the child and consider his efforts, trials, and sorrows petty. We must try to understand how sincerely they put all their hearts into their play and that the losses that seem so trivial to us are of great moment to them. We must learn to share all their experiences with them if we would develop the fine feelings we wish them to have at maturity.

Children must not be shut off in one part of the house to remain aloof until a certain age, but ought to be a part of the family circle, sharing its joys, work and minor sorrows. I do not mean that children should be pushed before visitors, have all their meals at the family table, or remain up till their elders retire; but there are times and places when it is the children's right and privilege really to be members of the family.

Even when they are very young children can assume responsibility for certain light tasks about the house, and as their age and strength increase, more and more duties should be added. The great American idea has been to remove all responsibility from the child and to give him a care-free childhood. I would not take one second of joy away from any child, but I would make it a joy for him to feel that the home is his and that he, too, helps in the making of it by performing certain duties that need to be done for the comfort of all. The child of 2 can pick up toys, put away dishes and silver, help set the table, dust low furniture and run many errands upstairs and down, and he loves to feel that he is "mother's helper."

He brings his daddy's slippers,
  He picks up baby's toys,
He shuts the door for grandma,
  Without a bit of noise.
On errands for his mother
  He scampers up and down,
She vows she would not change him
  For all the boys in town.

(*Song for A Little Child's Day*, by *Emilie Poulsson and Eleanor Smith.*)

Then the child can help prepare for the great festival days, birthday, Thanksgiving, and Christmas, those joyous days which bring the family very close together, and we can let him share not only in the preparation but in the joy of the day itself and here very early he gains a presentiment of the love and spirit of service that make home, and an ideal of the home that he will some day found.

As we would let the child share the labor and the festivals, so we must permit him to share the great family secrets and home joys. Let him know that he must never divulge anything that concerns only the family and I know that a child properly trained will never tell his playmates what he is told is a family secret.

So we begin very early to train him to keep his word and the sanctity of the home. When he has been thus prepared he is ready to share with the mother and father that greatest family secret, the coming of the new baby, and this confidence will bind the little one closer than anything else to the very heart of the home.

Children are so open-hearted and ready, and respond so sweetly and quickly to faith and trust that we often miss great happiness by not sharing our hopes and joys more freely with them.

If we keep the bond very close our home will become the great meeting place of all children, and this love and companionship between parents and children will be like a powerful magnet whose attraction the children can not resist. So from these beginnings the home tie will be so strengthened that we need never fear that the allurements of the world can draw our children from us, but can rest assured that they will always return to the "center of deep repose."

Article XI.

DEVELOPMENT OF IDEAS MAKES USEFUL MEN AND WOMEN.

By Mrs. Janet W. McKenzie.

Kindergarten training is often begun at home unconsciously, by both mother and child. It has its beginnings in the answers to the first questions familiar to every mother, such as "Mother, what color is this?" "How many are there?" "Which is my right hand?" "Which is heavier?"

If mother will take a little time to play with her children, as Froebel urges, the first question about color can be made the nucleus of a little game. Let the child find something of the same color as that which first interests him, then something in each of the six standard colors; count the articles found; classify them as smooth or rough, heavy or light, and so on.

In the same way the three type forms of solids—the sphere, cube, and cylinder—can be shown the child, and articles around the house classified as cubical like the cube or block, round like the sphere or ball, or cylindrical like a barrel. The size of objects should also be noted.

Color, form, and number can easily be made into games if mother has time to play with her children.

When mother is busy with the pressing routine of housework, perhaps a box of cranberries and a long thread in a coarse needle would entertain a dear little meddler, and give mother a free hour to work. Cranberries may be scarce, but buttons, flourish in every home; also inch pieces of macaroni which can be combined with circles or squares of colored paper cut out of bright advertising pages.

When baking is underway and little hands have to be kept from interfering, a piece of colored string one yard long with the ends tied together will afford much delight. Wet the string and make as perfect a circle of it as possible on a flat surface. By pushing a point in the circle to the center, we change what looked like a full moon into crescent; pushing in three places makes a clover leaf. The variations are endless. And the child can learn with an occasional suggestion from mother, to make familiar symmetrical outlines in this way.

Perhaps it is bread that is being baked. What possibilities in a small lump of dough! It can be made into a loaf just like mother's, or rolled into tiny biscuits.

Toothpicks have many possibilities as play material. With them pictures can be made in outline of houses, fences, furniture, boats or stars, and it is material that can be used over and over again.

Chains of paper are made by slipping one short strip within another and pasting the ends. Colored strips may be alternated with the white strips that have been saved from rolls of narrow ribbon.

Coloring with crayons, cutting out pictures, and pasting are all kindergarten activities that can be carried on at home.

A blank book in which pictures of furniture have been pasted for each room of a house give delight that I have seen last all summer. How eagerly the advertising pages in magazines are searched for the kitchen cabinet, bathtub, parlor suite, crib, or bed. How carefully the selected pictures are cut and pasted on the proper page.

With a hatbox as the frame for a doll house, and cardboard partitions making four rooms, a child's interest and attention may be occupied perhaps for several months. The house can be furnished as to occupants and rugs from the magazines, while curtains can be made for the windows from paper lace used in candy boxes. The furniture can be made from folded paper or built with small blocks of dominoes.

These suggestions only touch the rim of activities that kindergarten training opens up to the little child. What the mother may do at home will be helpful, but what the kindergarten does every day for three hours will be far more so. In kindergarten the child is a member of a social group and learns the valuable lesson of consideration of others and the spirit of team work.

May I say to mothers who are not within reach of a public kindergarten that your best course is to agitate and cooperate to have one if it is a possible thing.

If that can not be done and some kindergarten materials can be purchased, a catalogue from Milton Bradley Co., Springfield, Mass., or E. Steiger & Co., 49 Murray Street, New York, will be helpful in selecting the list of materials desired.

However, the spirit is more important than the material. "Come, let us live with our children," says Froebel, and "Come and play with us," say the children themselves.

Look back in memory to your own childhood. What are your dearest recollections of your mother? Her unceasing care for your food, clothes, teeth, eyes, health? Or is it not rather that happy day you took your lunch, mother and the rest, and went for an unexpected picnic? Did the shopping trips, the church going, the calling, the occasional matinee, leave the deepest impress, or the quiet hour when mother was alone with you and read or told you stories?

Dear mothers, cumbered, like Martha, with many cares, can you not see that the practical and necessary services which you render your child minister to the physical, which passes, but the hours of play and mental effort which you share and encourage and the ideals you set up for emulation, these are the meat of the spirit of your child, which nourish the very essence of his life, developing in him that intangible something we call personality, and forming his contribution to the race.

Article XII.

ENTER INTO THE PLAY SPIRIT OF YOUR BOYS AND GIRLS.

By Mrs. Lenore R. Ranus.

The play instinct is inborn in all children the world over; it is nature's own method for developing the senses, the muscles, and all bodily growth. Play is even more than this: It is the outlet of expression of the child's inner life. Many faults as well as virtues may be discovered while watching children at play. Perhaps a mother will find that her child is selfish or rude, and it is easy to discover a generous disposition and a good temper in the course of a play hour.

Games are the expression of the play spirit, and toys are the instruments necessary for the expression of this activity of child life. As a farmer needs garden tools to do his work, so a child needs toys for his play, or work, which play really is to him. And if toys are not provided ready made, he will invent them in order to be able to express his play spirit.

All play depends upon the physical condition of the child. A normal, healthy child plays all the time, is easily interested in his toys, and as he grows older invents games with them. If a child plays but little, can not easily be interested in his toys, will not play alone, and is cross, look first to his physical condition, then begin a course of training, or directed play. Start a suggestion, "Why not build a high steeple?" or "Make mother a train of cars with your blocks." Often, especially in the case of an only child, if mother can enter into the play spirit and play hide and seek, or march and sing, or even build with the blocks, it is such a treat and often a real help in promoting a readiness to play alone when mother must go back to her work.

Almost every child wants to help mother sweep, dust, make beds, wipe the silver, or run errands. Make play out of the work and yet let the little one feel he is really doing something. With tiny babies, too little even to walk, a mother can make play out of work. Have the high chair or the bassinette or carriage in the room where you are working and keep baby busy with toys. For instance, if you are working in the kitchen, let the baby have a big spoon, clothespins, tin covers, or anything new and safe, but always keep these things for the kitchen. If he is allowed to have them all the time they soon lose their interest and he becomes restless and unhappy.

A sense of newness even with old toys makes them desirable to a child. Children need change and variety because their power of concentration is not fully developed. This is the plan I use with success with my own little girl. Her box of dominoes, her nest of blocks, and her box of building blocks (composed of 16 cubes), I keep on a shelf in a closet out of sight. I also keep some picture books and toys out of sight. Then when the time comes, as it does so many times a day, when little girl says, "What I do now, muvver?" I go to the closet for a surprise. If I give her the blocks it is always with a suggestion for making something with them. She now comes to me and asks for "a s'prise, muvver." When she tires of the blocks I have her pick them all up, ready to put away, before she can have another "surprise." Sometimes, days at a time, she does not ask for a surprise, and then when I do bring out the dominoes, for instance, she is as delighted as if they were brand new. Her dolls I separate in groups. If she has four I put away two, and at the end of a week I bring out these two and put away the two she has been playing with. If you follow this plan with all toys, grouping them and keeping one set put away, you will always keep the little ones interested and happy.

Article XIII.

IT IS EASY TO TEACH THROUGH PLAY.

By Mrs. Lenore R. Ranus.

Everyone knows that a normal child has an active mind, but many parents do nothing to strengthen or train this vital part of their child's life leaving all mental development to the teachers in the schools. Those parents are indeed fortunate who have kindergartens in their town or city, for the kindergarten gives systematic mental training to children as early as the fourth year.

The easiest way to teach a child to think is through play. The mother can begin to sing Mother Goose rhymes to the mere infant in arms. As the child grows he recognizes the words and often the tunes. Later, he will ask for his favorite songs or rhymes and then begin to sing or recite himself. Up to this point the mother has accomplished three things—strengthened the memory, cultivated an ear for music, and the ability to carry a simple tune, and enlarged the child's vocabulary.

Be sure to use only the best grammar when talking to a child. Baby talk is funny for the grown-ups for a while, but the difficulty the child faces in overcoming this is tremendous.

As the child grows older a story hour should become a part of each day. This is really a lesson in language. The mother should begin with the finger plays when the child is 8 or 9 months old, such as "This is the church and this is the steeple," "Pat-a-cake," and the counting lesson, "The thumb is one; the pointer, two; the middle finger three; ring finger, four; little finger five, and that is all you see." "What the child imitates he begins to understand." That is the great purpose of the finger plays.

As the child grows other stories can be added to the story hour. A normal child, from about 2 years of age on, loves the stories of "The Three Bears," "The Three Pigs," "Little Half Chick," "Little Red Hen," and other similar simple tales, a list of which will be found at the conclusion of this article.

In telling stories to children, especially to very young children, avoid the element of fear. Children love best the stories they have heard before. A good rule is to let the child choose his own story. Mother can introduce a new story when she deems best. Another good plan is to have the child tell mother a story sometimes, as this will aid self-expression and be a lesson in language.

To teach counting make use of the play spirit again. In bouncing a ball, repeat the old-time jingle, "One, two, buckle my shoe." You will be surprised at how quickly the little ones will begin to count. Again, in building blocks, make a game of counting by saying, "Give mother one block," then "Give mother one, two, three blocks," etc. It is unwise to teach a child under 3 numbers higher than 10. They are well started if they are able to count as high as this correctly.

To develop the power of concentration, without which no human being can be successful in life, there must be a certain amount of directed play each day. Children are given this in kindergarten, and the mother can also give it to them in the home. When mother sews, the opportunity to direct play is at once afforded by having the child sit close by and sew a piece of loose-woven cloth, such as canvas or scrim. A big, blunt-pointed needle should be chosen for the purpose and tied securely to a heavy thread. When the child shows evidences of fatigue the work should be laid aside for another day.

Large, colored, wooden, kindergarten cubes and spheres, 1 inch in size, with a hole through the center to string on shoelaces, are also fine for a lesson in concentration. This occupation should be permitted only when mother is close by to watch and help.

For a child of 3 or older kindergarten sewing cards which are perforated and to be worked in colored worsteds, are interesting and instructive. An economical way to procure such cards is for the father or mother to cut squares or oblongs out of cardboard, lightly trace an apple, ball, or some other object on one of the pieces and then perforate the outlines every half inch, making the holes as large as the head of a pin. These outlines can then be sewed by the child in bright colors, working up and down in the holes. Be sure the outlines of the objects to be sewed are large, as small objects are too trying for young hands and eyes.

BOOKS TO HELP MOTHER IN TELLING STORIES.

For the Children's Hour—*Carolyn Bailey.*
How to Tell Stories to Children—*Sarah Cone Bryant.*
Stories to Tell to Children—*Sarah Cone Bryant.*
Children's Book—*H. E. Scudder.*
Half a Hundred Hero Tales—*Francis Storr.*
Mother Stories—*Maud Lindsay.*
More Mother Stories—*Maud Lindsay.*
Kindergarten Story Book—*Jane L. Hoxie.*
Firelight Stories—*Carolyn Bailey.*
The Children's Reading—*Frances J. Olcott.*
Three-Minute Stories—*Laura E. Richards.*
Story Telling in School and Home.—*E. N. and G. E. Partridge.*
Tales of Laughter—*Kate Douglas Wiggin* and *Nora Archbold Smith.*
The Talking Beasts—*Wiggin & Smith.*
The Story Hour—*Wiggin & Smith.*
Wonder Book—*Hawthorne.*
Tanglewood Tales—*Hawthorne.*

Just So Stories—*Kipling.*
Jungle Book—*Kipling.*
Nights With Uncle Remus—*Joel Chandler Harris.*
In Story-Land—*Elizabeth Harrison.*
A Little Book of Profitable Tales—*Eugene Field.*
Fairy Tales—*Grimm, Andersen.*
Æsop's Fables.
Peter Rabbit Stories—*Beatrix Potter.*
Index to Short Stories—*Salisbury & Beckwith.*
Myths That Every Child Should Know—*Hamilton Wright Mabie.*
In the Child's World—*Emilie Poulsson.*

POEMS AND SONGS.

A Child's Garden of Verses—*Robert Louis Stevenson.*
The Posie Ring—*Wiggin & Smith.*
Small Songs for Small Singers—*Neidlinger.*
Mother Goose Set to Music—*J. W. Elliott.*
Finger Plays—*Emilie Poulsson.*

Article XIV.

SOCIAL INTERCOURSE BRINGS VALUABLE LESSONS.

By Mrs. Lenore R. Ranus.

Allow your child to have company and playmates as often as you can; when possible, have playmates near his own age. Naturally out of this social intercourse will spring valuable lessons in courtesy, generosity, and patience. Always be fair in settling disputes among children. Do not favor your own child's story entirely, for though he may never have told an untruth, there is always the possibility of a sliding from grace. Sometimes it is very difficult to get a correct account from excited children. If the quarrel is over a doll or a train of cars and you can not discover who is in the right, take away the toy, remarking quietly that if they can't play nicely with it they will have to do without it.

I do not think that there is a better opportunity than in play to teach lessons in honesty; play is so vital a part of child life and the child takes his play so seriously. In teaching a child to be honest in word and action the parents must first be honest in all their dealings with the child. Never make a promise that you can not keep or that you do not intend to keep. For the same reason never threaten, "Son, if you do that again, I'll spank you," for if he does it again you will have to spank him or in a short time he will come to laugh at your authority.

Do no confuse the workings of an imaginative brain as evidence of untruthfulness, but enter into the spirit of the "make-believe." In the case of the little tot who says, "Muvver, I went out in the garden and I saw some Indians," enter into the spirit of the play and say, "Just make-believe Indians, dear, you mean?"

My little 2-year-old daughter quite startled me one day by insisting she saw lions and tigers and great, big elephants out in the yard. She was kneeling on a chair looking out, so I came at once to the window, not expecting to see a zoo in the yard but wondering what there was to make her imagine such things. There was nothing at all in sight but grass and flowers, so after thinking it over for a second I said in reply, "Oh, yes; I see some monkeys, too—just make-believe, like yours." She looked up at me and laughed delightedly, and at once we were entered upon a new game.

Cheerful obedience is another lesson to be learned from play. A child should not cry or fuss when mother says, "Time to put up your toys," or "Come to me, dear, I want to dress you." The average parents demand obedience, but usually exercise their authority only at such times as disobedience means inconvenience to the parents themselves. It is the teaching of constant obedience which requires the greatest patience and tact in all child training. You can not let your vigilance flag for one moment, nor can you allow an offense to pass unnoticed.

This brings up the question of punishments. I have said that children are naturally sociable. An effective form of punishment for most offenses, therefore, is isolation from the rest of the family and no reinstatement to favor until pardon has been asked and given. Make your punishment fit the offense. Children are so active that to make them sit still on a chair alone is a sufficient punishment for rudeness, whining, and the like. The child who persists in touching things which are not his to touch can be punished by having his hands tied behind his back. I used this form of punishment or "cure" successfully in breaking the nail-biting habit also.

Article XV.

GIVE CHILDREN TOYS WHICH ANSWER THEIR NEEDS.

By Mrs. Lenore R. Ranus.

Most children have too many toys; consequently they are not stirred to make toys for themselves, and their powers of invention are retarded. There are two classes of toys—useful and useless. Those are useful which answer the needs of child life. A ball is a most useful toy because it is about the first a child can play with. All mothers know how a babe, as soon as it is old enough to use its hands, loves a soft, bright-colored ball. From infancy practically through the whole of life the ball plays an active part. Tennis, golf, baseball, football—all sports of later life center around a ball.

Soon comes the building stage, with blocks. A 10-cent box of dominoes is excellent material for building and for making tables, chairs, beds and soldiers in a row.

Then comes the imitative stage of toys. Every child, boy or girl, wants to do as father or mother does. A 10-cent sweeper and a 10-cent broom are always a joy to a child's heart and enable the little one to actually help mother.

The doll also plays an important part in children's lives, for it answers the instinctive for nurture, which is inborn in children. Good serviceable dolls, not too many at once, are most useful. Children also need sets of dishes with which to learn to set a table and to pretend to cook, and which they can wash and dry, again imitating mother. Imitating father, children can play with toys of construction, such as sets of stone blocks and trains, automobiles, and other tools of man's world.

Toys are useless which are easily broken, such as expensive mechanical toys. These are generally more interesting to grown-ups than to children. Huge hobby horses, large dolls, and too many toys are useless also. Every little girl longs for a big doll, which is right and good; but for babies of two years or younger such toys are not only useless but lead to the bored child, which of all things is the most pitiable—a child to whom nothing is new, nothing interesting!

Through play the child should be taught the care of toys. A child who is taught to pick up its toys and put them away in their proper places becomes neat and orderly. Often children are careless with their toys, and unless carefulness is instilled in them they become wantonly destructive and have no respect for the property of others. If a little boy has a stuffed dog that barks, and he is found investigating the reason for the barking, he is not destructive so much as he is curious, and it must be remembered that through investigation the great discoveries of the world have been made. A child with a mechanical mind will often take his toys apart, "to see how they are made." But curiosity is strong in all children; therefore, before punishing a child for destroying a toy, be sure that he has been guilty of something more than pure thoughtlessness or curiosity.

Happy and contented—these are the two words which describe the condition of children in the kindergarten and should describe the condition in the home, too. You can accomplish so much more through love than you can through force. The busy mother in the home can have just as happy children as the kindergartner has, but she must devote a part of every day to them conscientiously.

Be reasonable with a child and he will be reasonable also. Remember that the desired results from child training depend first upon the physical condition of the child and secondly upon the time, thought, and intelligent care which you give to them.

A dear old lady said to me once, after I had remarked with discouragement that all I seemed to accomplish in a day was to care for my baby's needs, "My dear, you are doing a woman's greatest work right now, the training of your child's mind and morals. The time spent may show no immediate results, but you are laying the foundation for a character that will stand as a monument to your work and wisdom in years to come."

Article XVI.

THE HOME MUST LAY THE FOUNDATIONS OF CHARACTER.

By Mrs. John Henry Hammond.

The other day I was reciting to my little 5-year-old son the old nursery rhyme:

"Here am I, little Jumping Joan,
When nobody's with me, I'm always alone."

"What does that mean?" asked the child.

"Why, when nobody's with you, aren't you always alone?" I questioned.

"No," he replied, "because God is always with me."

How shall we measure the significance of this early realization of our Father's presence everywhere? For with the knowledge that God is present to help at all times, our children lose the sense of fear—and there is no greater lesson that we can impart to them. From earliest infancy we can begin to awaken in our children the sense of the all-presence of God.

Froebel, in his "Mother Play," a series of songs and games which he devised as illustrative of how a mother should play with her children, always seeks to make her look from the things which are seen and temporal to the things which are unseen and eternal; the father is to manifest so much patience and love toward his little ones as to make the transition of idea from the earthly to the heavenly Father simple and natural. The child is to be trained to look upon himself as a necessary and responsible part of a great whole, and to be taught that the whole can only be as strong as the weakest link. This is the basic thought of all true community consciousness. And from his earliest infancy he is to be taught to show gratitude to all who aid in ministering to his needs.

In these days, when so much is written about sense testimony, and so much is done to meet the physical and mental needs of our children both in the home and at school, there is a tendency to forget the teachings of Froebel and to give our children only a partial education, an education which stops short of their spiritual needs.

A momentous question, and one which all parents must answer individually, is "Do we want our children to be merely healthy little animals with a certain amount of superficial learning, or do we wish to develop their deeper natures so that one day they may be able to take their place in the world and, through their spiritual insight into things, become powers for good in the community?" for parents can not turn over their own responsibilities to the teachers and expect them to lay the foundations of character. The home is the place where this must be done, and it is for us to prove to our children that it is only as we are good ourselves that we help those around us. Then, imitation being one of the earliest and strongest instincts of childhood, our little ones, taking knowledge of us, begin practicing in their own lives what they see in ours; and, living in an atmosphere of love and harmony, they come early to understand that love is the greatest power in the world.

Article XVII.

SHARING THE CHILDREN'S WORK AND PLEASURE.

By Mrs. Princess B. Trowbridge.

"Come let us live with our children." What more fitting advice to mothers than this old motto of Froebel's? To live with our children not only makes for their best development, but also develops the best motherhood in us. There would be more happy mothers if all could know the joy and satisfaction there is in living with the children, in sharing their work and pleasure and letting them share ours.

Let the child be with you while you work; let him help you even if he does "hinder" a little. Let him take walks with you. Tell him about the birds, squirrels, rabbits, trees, flowers, and all you see. Encourage him to see even things that you do not see; or, if he is not inclined to observe readily, call his attention to the objects of nature, and gradually explain their life to him. He will soon begin to ask questions. Answer every sensible question truthfully. I want to emphasize this point. I have made it a rule to give information when it is asked for, and almost at no other time, at least not until the child shows by some word or act that he is ready for it. The best way to teach a child is to give him truthful answers to his questions. Someone has said, "It makes a vast difference whether the soul of the child is regarded as a piece of blank paper to be written upon, or as a living power to be quickened by sympathy, to be educated by truth."

I remember when my oldest child was about 2 years old that, in watching the sunset he said, "Mother, where does the sun go when it sets?" I explained to him as well as I could, and then, taking an apple to represent the earth, showed him how the little Chinese children had sunlight when it was dark on our side of the earth. Whenever he talked about it afterwards he always said, "After dark the sun is down with the little Chinese children." One day, about three years later, he came running home from kindergarten and exclaimed, "Oh, mother, now I know what you mean by the sun setting." Then he repeated for me the little song, "Good Morning, Merry Sunshine":

Good morning, Merry Sunshine,
How did you wake so soon?
You've scared the little stars away,
And driven away the moon.

I saw you go to sleep last night,
Before I ceased my playing;
How did you get 'way over there,
And where have you been staying?

I never go to sleep, dear child,
I just go round to see
My little children of the East,
Who rise and watch for me.

I waken all the birds and bees
And flowers on my way,
And last of all the little child,
Who stayed out late to play.
—*Eleanor Smith.*

Another time my boy asked the question, "How are the mountains made?" To explain to him I took two apples, setting one in the window and letting it shrivel up, and baking the other at the first suitable opportunity. In showing the baked apple to the children I pointed out that heat had made it burst out of the skin and that in just this way the earth, which was hot at the center, erupted into mountains. With the other apple I showed how the drying of the skin had made ridges, like those on the crust of the earth. Some months later the boy went to visit his uncle, who is a geologist, and when the conversation turned upon mountains, he remembered all I had said, was interested, and talked most intelligently on this subject.

On our walks through the woods I do not say, "There is a beautiful tree," but rather, "There is an oak or an elm tree." When they were 4 and 5 years old my children knew all the trees in our suburb, not only by their leaves, but by their bark. In the same way they have learned about the flowers. Even the baby knows a "robber" (robin). Treat children as intelligent beings, not as playthings or little animals.

In simple little ways that will occur to every mother we can explain the facts of life to our children. My family is fortunate in living in a semirural district, and we have a cow; the question soon arose, "Where did the baby calf come from?" We told the children truthfully as much as was necessary for them to know at that time. Later we shall tell them more.

A little training in child culture would be most helpful to any mother. My training as a kindergartner has made my work with the children much easier, more pleasant, and, of course, more intelligent. I would advise women with children to attend all the mothers' classes and parents' clubs they can and to read as many good books on child culture as possible. But these things are not absolutely necessary to the making of a good mother. She needs first to have an open mind, a full heart, and a love for her child which plans for its healthful and symmetrical growth, physically, mentally, and spiritually.

One of the most helpful books I have found on the management and understanding of the child is Miss Elizabeth Harrison's "A Study of Child Nature."

Other good books are: "Poems Children Love," by Coussens (Dodge Publishing Co., New York, $1.25); "Mother Stories" and "More Mother Stories," by Maud Lindsay (Milton Bradley Co., Springfield, Mass., $1 each); Emilie Poulsson's "Finger Plays" (Lothrop Lee & Shepard Co., Boston, $1.25), and books illustrated by Leslie Brooke. Some of these are: "The Tailor and the Crow," $1; "The Truth About Old King Cole," by G. F. Hill, $1; "Johnny Crow's Garden," $1; "Johnny Crow's Party," $1; "The Golden Goose Book," $2; "The Nursery Rhyme Picture Book," $1. These are all published by F. Warne & Co., New York.

If the mother can play or sing, I suggest that she purchase a few good song books. These will afford both the children and herself much pleasure and profit. Songs not only increase the musical sense, but also enlarge the child's vocabulary and imagination, and develop community feeling. Emilie Poulsson's book, "Songs of a Little Child's Day," with music by Eleanor Smith (Milton Bradley Co., $1.50), is good for children 4 years old and over. The children would also like "Children's Singing Games, Old and New," by Mari Hofer (A. Flanagan Co., 50 cents).

Article XVIII.

SIMPLE PLAYTHINGS MAY BE UTILIZED.

By Mrs. Princess B. Trowbridge.

A worsted ball, if kept clean, makes an excellent plaything for a little baby. If it is suspended from his carriage or crib it will help him to learn to focus his eyes, and he will be amused by it for a long time. When the child is a little older, let him sit on a quilt on the floor and play with several balls in the six colors—red, orange, yellow, green, blue, and violet. Each ball should have a worsted string of the same color attached to it. When the child is a little older still, play simple little games with him, such as rock-a-bye baby, pendulum of a clock, swinging the ball back and forth and up and down, and in other ways that will occur to every mother. Unconsciously the child will acquire a sense of form, color, motion, and position by such games. Say to him, "See the pretty round ball," "See the pretty red paper," and the child will delight to find and bring to you other things that are round like a ball and red like the paper. A set of worsted balls in the six colors can be obtained from kindergarten supply houses, Milton Bradley Co., Springfield, Mass., or E. Steiger & Co., 49 Murray Street, New York.

Long, slim clothespins make excellent playthings for babies. They can be used as babies or soldiers, or to make fences, trees, log houses, and many other interesting things. Playthings that can be taken apart and put together again are good to have; also blocks with which the child can build all kinds of objects—engines that he can push along the floor, balls to bounce and throw, doll carriages, washing sets, etc. Dolls with clothes that button, and unbutton and come off may be used to teach the children how to dress and undress themselves.

For older children kindergarten beads are very useful and helpful. They are in the form of half-inch wooden balls, cubes, and cylinders, in the six colors, and also in the natural unstained wood. A shoelace or bodkin and cord is used for stringing them. I would suggest, to begin with, that the child string balls only, and all in one color. After he has made a long string of these ask if he would like to use two colors. He will probably string them in irregular order at first, and if so it will be necessary to suggest alternating the colors, putting on two of one color and one of another, and so on. In this way he will soon learn all the colors and numbers, perhaps, up to six or eight and will know one form.

What else is there with which little children's hands can be kept occupied? First of all, sand. Just turn the children loose in a pile or box of sand with a spoon, a pail, a cup, or anything with which they can dig or shovel. I personally do not like to have sand in the house, but if you have a suitable place for it it need not make any trouble. An old kitchen table turned upside down with the legs cut short and put on the other side makes a good table for sand. A piece of burlap or denim placed under the table keeps the sands from being scattered over the house. Children can early be taught not to scatter it.

With clay a simple little cradle may be made. The child first rolls a piece into a ball, cuts it in half, with a string. One of these halves forms the lower part of the cradle. The other he cuts in two, using one piece for the top and remodeling the other into a ball for baby.

Birds' nests with eggs can be made with clay; also apples, oranges, cups and saucers, and even animals may be attempted. In fact, clay has almost endless possibilities as play material. Plasticine is the best kind of clay to use, as it is easily handled and is always ready. For little children, before they are old enough to use scissors, tearing paper is an engaging occupation. Tear a piece of old newspaper into an oblong shape, it may be any size, about 2 by 4 inches we will say. By folding this in the middle it will make a little tent. Again, fold in thirds, turn both ends down for a table. The child can tear paper into trees, a ball, doll babies, and many other simple shapes.

When the child is old enough he can begin to use scissors, but be sure to provide a pair with blunt points that can not possibly hurt him. These will afford endless hours of amusement and profit. Have you found that "he cuts papers all over the floor"? Of course he does, but use this occasion to teach him neatness. Let him have his own little wastebasket, and he will delight in picking up the papers.

Let him cut pictures from old magazines and paste them into a book made from manila wrapping paper. To make the book, take any desired size of paper, fold several sheets in half, and sew them together along the crease. A pretty picture might be pasted on the front page, or the child could draw one on it. This will take many days' work, but all the time he will be learning many lessons in patience, concentration, neatness, and accuracy, and will be developing artistic talent if he is apt at drawing. Best of all, he will be gaining power to do things. If, in his cutting, he comes to a picture that has a story, tell it to him. Do not criticize his work, as this may discourage him, but see to it that he does the best he can.

Let the child draw with colored crayons or "crayolas." You will be suprised at how soon and how well, under proper guidance, he will be able to use this means of expressing himself.

Article XIX.

HELPFUL PLAYS CAN BE CARRIED ON WHILE MOTHER IS BUSY.

By Mrs. Princess B. Trowbridge.

Often mothers say to me, "Don't all the things you do with your children take most of your time"? By no means. I am a mother of three, and do all my own work, except washing and ironing, and I have to do sewing without end. A busy mother will make suggestions which can be carried out while she is busy at her household tasks. Stories may be told. For instance, baking will suggest the story of "The Gingerbread Man." This can be found in "Best Stories to Tell to Children," by Sara Cone Bryant. Paring an apple or a squash makes the opportunity to tell about the seeds hidden in their cradle, how in the winter they go to sleep, and so on. Make a whole story of it. A few days ago I told my 3-year-old baby this story and sang to her:

I know of a baby so small and so good,
Who sleeps in a cradle as good babies should.
Sleep, baby, sleep.
I know of a mother so kind and so warm,
Who covers this baby from all cold and harm.
Sleep, baby, sleep.

Several days later we had another squash to prepare, and immediately she said, "Mother, sing about the baby." Later, on request, she told her older brother and sister the story of the seed babies.

It is well to make much of holiday celebrations. Have the children prepare little gifts for a birthday. Perhaps it may be only to draw a picture. On Valentine's Day we always make valentines. Use scrap pictures and paste them on colored cardboard. Or use paper doilies, cutting out the center and pasting on a piece of cardboard, with an appropriate picture underneath. This makes a pretty little valentine of paper lace. Cut out hearts of red cardboard or paper and string them together in graduated sizes, on red ribbon or twine.

At Christmas time even the 2-year-old can make something. A simple matchholder may be made as follows: Cut from cardboard a circle about 4 inches in diameter. Cut a slit one-third of the diameter at each end. Fold the lower half upward, turning the cut edges in and pasting them to the upper semicircle to form the holder.

To make a match scratcher cut a piece of sandpaper any desired shape and paste on cardboard. A Christmas picture or bell may be pasted at the top of the cardboard. Penny calendars can be used by the children in endless ways.

Mats for the dining table are also easily made. Cut a 6-inch circle of cardboard with a circular hole in the center and wind with raffia. Picture frames can be made in the same way, cutting the cardboard any shape desired. There are endless things children can make with water colors or crayons and cardboard, using colored paper and the Perry pictures. Perry pictures illustrating all sorts of interesting subjects can be bought for 1 cent each. A catalogue will be sent upon request by the Perry Picture Co., Malden, Mass.

Children never tire of making chains for decorating purposes out of colored paper. Take a strip of paper about 4 inches long and half an inch wide and make a ring by pasting one end over the other; slip another strip through this ring and paste ends together, and so on.

Our children make paper chains for one another as birthday presents. They always bring delight. White and colored chains can be used as Christmas tree adornments and give the added pleasure of letting the child feel he has helped make the tree beautiful.

Let me urge fathers as well as mothers to enter into the life and play of their children. For only when the father lends his aid in the process of child training can there be perfect unity. By working together mother and father can lead the children to understand the life about them. They can teach them to know and to love nature. They can direct the emotions, develop the intellect, and strengthen the will. And as a result the children will naturally come to feel and understand the divine love which lies only half concealed behind all things.

Article XX.

EDUCATIONAL MATERIAL CAN BE BOUGHT EASILY.

By Dorothy Canfield Fisher.

In even the thriftiest and most economical family more money is spent foolishly on meaningless flimsy toys for children than parents realize. The familiar 5-cent bag of candy which many country children expect on a trip to town would buy a box of colored crayons, which would be a wellspring of joy and profit to them for days and days. The cheap 25-cent gaudily dressed doll, which goes to pieces after a day or so of vigorous play, costs as much as 5 pounds of potter's clay which would make innumerable toy dishes, and be the source of incalculable educational advancement. If the mother, away on a shopping trip, can resist the temptation to "take the children something" in the shape of a poorly constructed woolly lamb which loses its legs in the first half-hour's play; if she can persuade the visiting aunt to let her spend the money which was to have bought candy, very bad for little teeth; if she can head off the bachelor friend from bestowing a mechanical top which becomes uninteresting after the second day, she will soon have money enough to buy a treasure store of profitable educational playthings which will last through the children's early years.

Colored crayons cost 5 cents a box; for another nickel a good supply of wrapping paper can be bought from the grocer, which, cut into large, square sheets, furnishes the background for much "drawing" and coloring by artists of three and four years. They can be shown how to draw around a drinking glass or a small plate, to make circles; around a block to make a square; around a salt cellar to make an oblong, and they delight in coloring the designs thus formed. This is fine preparatory training for writing. These colored designs can afterwards be cut out by the children with blunt-pointed scissors (which can be bought for 10 cents a pair) and this furnishes another exercise for the hand. The general opinion is that children under 5 are not able to use scissors, but there are many exceptions to this rule.

As the children grow older they like to change from colored crayons to water colors, a box of which can be bought for 10 cents. Such a box is, next to modeling clay, the most lasting satisfaction to children, and the uses to which it can be put are not to be counted. The spools which they have been playing with can be colored brightly and made into necklaces. All the designs they have made and colored with colored crayons can be colored with water color with fresh pleasure. Old magazines with large-size pictures can be colored, and the children, if a bit encouraged, are very apt to make large drawings on the big sheets of wrapping paper and color those. Paper dolls cut out of fashion magazines and colored by the children not only cost nothing, but give excellent practice to hand and eye. The mother should remember that any child who has had much practice in handling pencils and brushes has an immense advantage over others when he goes to school and begins to learn to read and write. After the child passes his fourth birthday his mother should take special pains to encourage him to use his fingers in drawing and coloring, although never in small designs, which might tire his eyes.

On the whole, perhaps the very best use that the country mother can make of money saved by economies on candy and flimsy toys is to buy herself a few good books which will give her valuable hints on her new profession of motherhood. She does not dream of trying to get along without a good cookbook; why should she think she can manage all the details of another new business without any instruction? Let her, as a matter of course, put on the kitchen shelf beside the cookbook one or two good mother books which she can take down and dip into at odd minutes as she waits for the water to boil or the oven to heat. One of these books will cost her but a 2-cent stamp, and if she reads it carefully will give her innumerable suggestions. This is the catalogue of any firm handling kindergarten material such as the Milton Bradley Co., Springfield, Mass., and E. Steiger & Co., 49 Murray Street, New York. Most of the country mothers know nothing of the material sold by such firms and will be surprised to find that valuable educational material is offered at prices which make it far cheaper than common toys, bought at the stores, and that she will need no training to make excellent use of much that is intended for class use. At the back of such a catalogue is a list of very inexpensive books for mothers which will give her suggestions for paper cutting, clay modeling, and drawing.

But the great, great beauty and value of country life for the child is too big a theme to do more than touch upon in so condensed a sketch. This is, of course, his closeness to nature and all sorts of natural processes which go on about him. But even here he needs his mother's help, for without it he must lose much time in misdirected effort. When he is so tiny that he can only look on, his mother, if she is wise, will see to it that he has a chance to look on; that he sees the horses watered, the cows milked, the chickens fed, the garden planted, the butter made, the washing done, and the hay cut. As fast as he can understand she will give him a simple explanation of all these vital events, and as soon as he is strong enough to take part in these activities she will use her ingenuity to devise ways for him to take a genuine part in the family life. Of course he will bother more than he helps at first, and nobody but his mother will have the patience to respect his bungling attempts to join the work done about him. But to her they will be inestimably precious and necessary for his development, and she will take the greatest pains not to discourage him. If, in addition to the handwork mentioned above, the country mother will see that her children are not cheated out of their birthright of a share in the processes of country life she need have small fear for their health, happiness and moral development.

A few maxims to hang up over the kitchen sink and read over while the dishes are being washed:

1. Little children wish and need to be doing something with their bodies and hands every minute they are awake.
2. They need a frequent change of occupation.
3. If I provide them with interesting things to do, they will not have time to be fretful or to do naughty things.
4. When I see my children harmlessly occupied and using their hands or bodies, I may be sure that they are educating themselves, even if I can not understand the pleasure they take in their occupation.
5. When a child has a great desire to do something inconvenient, let me ask myself, "Why does he want to do it?" and try to understand and meet the real need which is apt to underly his unreasonable request.

Books which every mother should own:

"Mottoes and Commentaries of Froebel's Mother Play" and "Songs and Games of Froebel's Mother Play," translated by Susan E. Blow. Published by D. Appleton & Co., New York City; $1.60 each.

"As the Twig is Bent," by Susan Chenery. Published by Houghton Mifflin Co., New York City; $1.

"Fundamentals of Child Study," by E. A. Kirkpatrick. Published by Macmillan Co., New York City; $1.25.

"In the Child's World," by Emilie Poulsson. Published by Milton Bradley Co., Springfield, Mass.; $2.

Article XXI.

ISOLATION IS AN EFFECTIVE PUNISHMENT.

By Mrs. Laura W[redacted]nce.

If you should ask any kindergartener what punishment she relies on in all cases needing instant attention she would probably answer, isolating a child from the group and excluding him from all work or play for a short time. Usually putting John to one side where he can see what he is missing will be sufficient, and the question, after a few minutes, as to whether he is now ready to join the class again will meet with a ready acquiescence.

Does this plan work as well in the home as in kindergarten? It certainly does, but it must be differently managed. Since there is not so much definite work or play going on in the home as in kindergarten, exclusion has to be more complete to be noticed by the child. That is to say, something more will be necessary than simply having him draw his chair to one side of the room. It must be, "Go away by yourself, John, until you are ready to be a pleasant companion again." Banishment must be complete even to closing the door. Of course, cries will ensue, sometimes screams, but they are caused by no physical pain, and the mental shock of being entirely alone and cut off from the family is generally all that is needed to stop naughtiness. After the tempest is over the mother should go to her little one and say, "We want you when you are yourself again, John. Can we have you back now?"

Many of the minor naughtinesses, such as whining, teasing, mimicking, shoving, snatching, and stamping, are easily managed in this simple way.

Just here let me say we mothers must be careful in our choice of words for wrong actions. Let us not call all of them bad, or even naughty. If a child is disagreeable or unkind when he is tired, we shouldn't tell him that he is bad. Save that worst word for real wrongs like slapping, sneaking, or deceiving, and the like. Then it will carry weight and mean something. Real wrongs must be met with severe punishments, such as depriving the child of some cherished possession.

Even a baby as young as a year old feels isolation. One of our little ones was forming a habit of throwing herself back in her high chair and screaming all during meal time because she didn't get things just as she wanted them. She was cured in less than a week by her father taking her, chair and all, to the kitchen the minute she began and leaving her there behind a closed door until she stopped. How long did she cry? At the most, two or three minutes, and less and less each time, until she gave up the habit entirely.

Care must be taken to go to the child as soon as the storm passes, or he will begin to cry again from a feeling of neglect. The isolation method of punishment takes time, but any kind of punishment takes time except the ever eas[illegible] and shake, which do so little good and soon breed in a child the fear of physical violence.

By a little wise thinking and skillful management it is often possible to avoid punishments entirely. One method is to avoid the issue by diverting the attention. Another simple preventive is to explain actions and happenings to children, without any note of irritation in the voice. Even two and three year olds can grasp much more than most people suppose if it is only told them in language they can understand. Explain what is going to happen and why they should act in such and such a way; explain what did happen and why you asked them to act as you did. Help to trace an action and establish a connection between effect and cause.

Of course, explanation may be carried to excess. Sometimes instant and unquestioning obedience is necessary for safety. Positive commands will always be obeyed if the children know that as soon as possible explanations will follow. When a grown-up obeys blind orders he expects that the reason for them will be explained to him later. Why should not a child expect the same treatment? This method develops the intelligent side of a child's mind, and helps much in good citizenship later on.

Article XXII.

THE REAL MOTHER IS CAREFUL TO TRAIN HER CHILD'S CHARACTER.

By Miss Harriet Frances Carpenter.

A young mother recently related an occurrence which had repeated itself on several occasions in her home and which she had found most trying. She said: "My children go and get their clean stockings and tie knots in them in connection with a game they play, and often when I start to dress the children I can't find a single stocking that hasn't been tied tight several times. One hot summer afternoon I lost patience. 'Anne,' I exclaimed to the eldest, 'Why do you cause me such annoyance, day after day?' 'What are mothers for?' she asked, and I saw that she was right."

I gravely asked this thoughtless mother if it would not have been better for Anne to aid in the task of untying the stockings, being led, by sharing the toil, to feel grateful for the many times her mother's patient hands had done it for her.

"Oh, she couldn't untie them," she answered with a shake of her head.

"Had she tried, and found it impossible, she might, of her own accord, have stopped knotting the stockings," I replied.

"But I wanted to take the children to pay a visit, and there wasn't time enough to let her try."

"Then oughtn't she to have forfeited the pleasure of going with you?"

She stared aghast; then, with a pitying look, burst out: "It's easy to see that you are not a mother. No mother could do that—her mother heart would not let her."

I was silent for a moment; then remembering that physical and spiritual motherhood are not necessarily embodied in the same person, explained without impatience the effect such indulgence would have on the child, and pointed out that the most loving mother takes as great pains to train her children's characters as to provide for their bodily wants, and that the greatest love is that which is most far-seeing. But to the end the mother stoutly held to her conception of the "mother-heart."

A scene observed at a later hour in the day revealed this mother, regardless of her "mother heart," in a fit of ill temper administering a violent shaking to the said Anne.

"Nora," complained a mother to her sister, "your namesake spoils all of our rides in the new car. She just will go and then she wants to come home immediately, and kicks and screams all the way. Sometimes we set her out on the road and ride on, but she knows that we will have to come back, so that doesn't do any good. You're a kindergartner, Nora; you must break her of it."

"Leave her at home until she shows that she understands that she should not spoil the enjoyment of others," advised the aunt. But this the mother flatly refused to do, and the miserable rides continued.

Some time later the mother went on a visit and the aunt was left in charge of her refractory niece. I saw her riding in the automobile several times without the offender. Then one day the small figure sat in its usual place, and in the aunt's arms was the two-year-old brother. They called at the door. "Are you having a pleasant outing?" I asked little Nora. "Yes," she beamed. "I used to spoil our rides; now I'm showing little brother how to make everybody have a good time."

"We had to go without Nora for a few days," remarked the aunt quietly, "but now she is trying to think of others as well as of herself."

In this case the aunt was more truly the mother than the child's own parent. For she understood that mother love should be something more than the gratification of a passion, and this insight gave her the courage to face the child's passing disappointment for the benefit of her future welfare.

What seems of slight importance at the moment assumes a quite different aspect when considered in the light of its future results.

Article XXIII.

THE CAREFUL MOTHER PONDERS THE EFFECTS OF HER CHILD'S ACTIONS.

By Miss Harriet Frances Carpenter.

It was suggested to a charming mother that the companionship of other children would help to prevent selfishness in her only son. "Oh," she said, "I won't allow him to become selfish; that I will prevent above everything else!" A few days later this boy was asked to give up the front seat in the automobile to a little cousin who was visiting him. With a look of sullen determination he refused. Tears filled the eyes of the other little fellow, who stood waiting in the road, but when the mother started the car, as if to leave him, he jumped in, glad to take the back seat rather than have no ride at all. This was good training for him, but what of the first boy, sitting in selfish enjoyment of the prized place? His mother's naturally kind heart caused her to question what she had done.

"I must see that he takes the back seat sometimes," she said under her breath, with a serious look. But the time to give him power over himself was then. She had let the opportunity pass, and with each postponement the struggle for unselfish surrender would become more difficult.

"I want my child to love me," protested a father, refusing to check wrongdoing in his son. And later, when the test of love came the child failed because of a weak, selfish will.

A mother, feeling the necessity of teaching her child to take care of his toys, was very severe when she found that a playmate had broken some of them. "You should not have allowed him to play with your toys," she said reprovingly, not realizing that she was missing a splendid opportunity to encourage the love that forgives freely, and could have emphasized care of toys at some other time.

Could such an attitude be adhered to without marring a child's character? If it had been the other child's mother who had acted in such a manner would she not have been considered unkind? And if a great many mothers were like that would it be well for the social whole?

These and many other questions a mother must ponder. Some things children do she must forbid altogether, as unproductive of good; other activities she will permit because of their value as steps in growth, even though they annoy her. Yet she should not permit them simply because the child likes to do them. "Because little boys like to act like monkeys is no reason that they should act like monkeys; monkeys are only beasts; they are boys," remarked Kingsley.

The wise mother carefully eliminates the coarse and debasing in pictures, choosing to set before her child ideals commensurate with the serious matter of living. An unwise mother gave her children a book illustrated with grotesque caricatures of a little colored boy. She also told them the story which was offensive to good taste.

"They like it," was her comment. "I wouldn't be without it for anything! Whenever they misbehave I can always control them with this book."

"I control my children with pictures of chivalry," said another mother. "They like them better than anything else; and no matter how restless they may be they soon become manageable, 'trying to be knights.'"

It has been pointed out by Froebel in his Mother Play Book that children grow along lines that are made attractive to them. The first mother was encouraging buffoonery and ridicule; the second self-control and thoughtfulness for others. The first had failed to rise, as did the second, to spiritual motherhood; for the device of the moment satisfied her, simply because it was an easy form of entertainment. What we imitate we learn to like is an axiom in the kindergarten. This is why Froebel's suggestion of mother plays is so valuable and why kindergartners study so seriously the play of children, and also why playground leaders are being introduced into our best schools.

Article XXIV.

THE INFLUENCE AND INSPIRATION OF SPIRITUAL MOTHERHOOD.

By Miss Harriet Frances Carpenter.

Woman's power to nurture the good has been a theme for the poets of all times. Dante saw Beatrice but once, yet it was she who sent him on his way singing the greatest song of Christendom—the anthem of redemption from pride and selfishness. Wagner's Brunnehilde suffered her goddess nature to give place to the lowly limitations of human weakness that she might save the heroic Walsungs. Goethe's phrase, "the eternally womanly, leading men upward and on" is familiar to all.

Froebel also not only pointed out the spiritual nature of womanhood, but upon it he built his world of hope for the advancement of humanity. In the nurture-power of woman he sees the means of solving the moral problems of the race; of strengthening its spiritual life. It is his aim to lift motherhood to its highest plane, to see that chance plays a comparatively small part in the educative processes of humanity—that certainty encompasses the life of the children. He sounds the call to women for a higher unselfishness, courage, and insight. Because of their universal love for things weak and helpless he claims that all women are called into the fostering care of children, whether their own or others.

"I wish I belonged somewhere," pouted the hotel-bred child of wealth and luxury, yearning for a real home and a real mother. To cure his ennui his physical mother sent him to a kindergarten around the corner. "I'd like to stay here," he said to the kindergartner one day at parting, "all the time—eat and sleep—all day and all night—I wish you were my mother!" he finished in a climax of aspiration. He evidently felt the lack of real mothering in his own mother.

No child, however, rich or poor, should be deprived of the spiritual influence of real motherhood, by means of which alone his powers may be developed and without which lives have often been blighted.

What fitter task could Froebel realize for women than for her to follow the path which she has more or less instinctively chosen throughout the ages? Yet it is with some fear and much instruction that he urges her on her way. Not lightly does he send her forth, but weighted with the greatest burden of responsibility that woman has ever borne. Why not trust her to do her work uninstructed, unconscious of the part she is playing? Her sympathy is undoubtedly great and spontaneous. But sympathy is not enough to insure wise discipline of the unruly tendencies of the human child. Misguided, sympathy fosters dependence and encourages weakness and self-indulgence. Untrained, it deals but vaguely with the practical problems of life. Moreover, even in woman sympathy is often undeveloped. "Did your father whip you, as I wrote him?" asked a cross-looking teacher of a small, cringing Italian in the second year of public school. The same child came under observation in a fourth-year class some time later. He was listening with rapt attention to the immortal story of the "King's Children," told by a normal school practice student. The comment, "How alive Pedro is to the story," brought out the irritable response from the teacher in charge: "On, yes, he'll listen to stories, because he likes them, but he's a bad boy." Feeling that there must be something worth finding behind a face lit with enthusiasm for a tale so noble, the observer visited the home (so called) of the unfortunate Pedro; a drunken father and mother, a girl of 12 earning the living, the boy hungry for food and comradeship—it was all comprehensible in a moment. Pedro was transferred to an instructor possessing insight and spiritual power. Like a dog he followed her everywhere, until she transformed his love into acts of service, and he became the most useful member of the class.

Even when the intentions are of the best many are the pitfalls that surround the unenlightened experimentalist. "I have to whip him," a father gravely asserted of his sensitive, highly imaginative boy, "because then he stops doing the thing. He does something else, though," he added lamely, feeling, but not understanding, that he was not reaching the cause, but only the particular act. Had the child been less strong and buoyant in temperament he might, no doubt, have crushed him into submission; as it was, he only confused him, whereas firm but sympathetic comradeship might have cleared his path and helped him on to the higher manhood of which he was capable.

Article XXV.

THE CHILD NEEDS CARE, NURTURE, AND LOVE.

By Mrs. Bertha Goodkind.

Many parents fail to realize that the child born to them is not a personal possession, is not a thing to mold according to their own desires, their own ambitions, or their own social aspirations. From the very start we must rid ourselves of this sense of ownership and begin from the cradle days to look upon the child as an individual being, whose sacred right it is to unfold his own self with the help, care, nurture, and love which are due him.

What definite means can the home adopt for the best development of the child in the first six years of his life? First, with regard to the things which surround him—furniture, pictures, books, toys, clothes, and ornaments. In how far may these lend themselves to his development?

In the room in which the child spends most of his time indoors, the furniture ought to be plain enough so that he can do no great harm in playing freely about. A small, substantial kindergarten chair and table to work on are almost indispensable in the child's room. Kindergarten materials can be obtained from Milton Bradley Co., Springfield, Mass., or E. Steiger & Co., 49 Murray Street, New York. Both companies send free catalogues upon request. A good blackboard should be hung securely on the wall, care being taken that it hangs low enough for the child to use easily, for from the hour he can toddle he will delight in chalk markings, and these even then will have value because of the muscular development afforded the arm and hand.

The pictures on the wall in the child's room ought to be distinctly for him, and hung low enough so that he may take them down and handle them whenever he chooses. Every child likes color and delights in the "story picture," the picture which has a story connected with it. Pictures of animals, of family life, of other children's activities, of the simple trade-world such as sustain family life, are excellent for the nursery.

The child may be taught to discriminate between his own things and those belonging to others by being allowed to visit the family living room where mother's and father's books and their pictures and furniture are used with caution and care. This will also lead him gradually into an appreciation of the adult's standard of art in pictures, music, and literature.

The value of good music in the home can not be overestimated. Fortunate the child whose ear is accustomed from the cradle to beautiful sound and melody. And yet even more fortunate the child who is accustomed to hearing the singing voices of those about him. Children love to hear songs, children's songs, big people's songs, and folk songs. They love to hear the songs of long ago when mother was a child, and the lullaby grandmother sang. The child loves especially a bedtime song, sung beside his crib before the final "good night."

As to books, there are the standard ones, the Mother Goose Nursery Rhymes, the simple animal story books, and the fairy tales in simple form. A helpful list of modern books, picture, and story books has been carefully reviewed and listed by the Federation for Child Study and may be had upon application to the secretary, Mrs. Thomas Seltzer, 219 West One hundredth Street, New York City, N. Y., for 30 cents. The Bureau of Education also has suitable lists of children's books.

Story-telling is a great art and the mothers or fathers who have this gift can give their children unbounded joy and fill them with fond memories of the story-hour that will never be forgotten.

As for moral influences in the home, it is the words the child hears us speak, the things he sees us do which will have the greatest effect on his attitude toward those about him, such as respectful care and tender affection toward the grandmother, the grandfather, the aunt, the uncle; our treatment of those in our employ, etc. Family festivals, such as birthday celebrations, Christmas Day, special excursions or picnics in which the whole family join, make glorious impressions on the child's mind.

The spirit of charity should permeate the home. The little child is too young to know how to help the less fortunate, but he will imbibe the home spirit and with his growing understanding he will adopt the ideals by which he is surrounded.

Above all other influences the most telling is that which the parents create by means of their relationship to each other. If peace reigns supreme and father and mother live as one, having a deep, true, and earnest affection for each other, facing together the joys and sorrows, and supplementing each other's strength at every turn, there is no greater legacy they can leave their children than the influence and memory of such a home.

Article XXVI.

HOW THE CHILDREN KEEP A WEATHER CALENDAR.

By Mrs. Bertha Lewis.

If nature study is to be begun for the first time, either in school or in the home, the easiest introduction is by the time-honored topic of the weather in conjunction with the day. A weather calendar naturally follows, the days being marked with appropriate colors and symbols, yellow for the sunshine, gray for cloudy, kite for windy, umbrella for rainy, etc. The calendar may be decorated to represent the main nature-study idea for the month, a snow scene for January, skating for February, etc.

Daddy has a newspaper every morning; why should not the children have one of their very own? Theirs can be a sheet of drawing paper hung beside the calendar, on which one of the children may draw a flower, etc. These drawings may not be works of art from the grown-up standpoint, but they aid the child to observe and to tell, as well as he is able, what he has seen. He should be shown where he can improve his work, but the original sketch should never be interfered with or criticized. A more accurate representation can be given in a separate lesson after the child has had a chance for further observation, but in no way connecting this with his first drawing on the calendar, lest he become discouraged or self-conscious and try to express something which he has not really seen.

To adopt a tree in springtime is another good plan. Have the children give the tree a name and so make of it a companion. Always include the family name of the tree. Frequent visits must be made to the tree because it can not come to the children. Notice how the buds are arranged on the branches, which of them grow most rapidly, and what they turn into, leaves, flowers, or branches. Try to discover if the tree has any other visitors; bright eyes will soon discover many. Play a game around the tree; sing to it some such rhyme as the following:

Time is never wasted listening to the trees;
If to heaven we arose as grandly as these,
Holding to each other half their kindly grace
Haply we were worthier our human place.

Because the child, after making mud pies is told that his face is dirty, he naturally concludes that all soil is dirt. Point out to him that it is only when out of place that it is dirt, for in its right place it is the home of miracles, the matrix from which comes that wonderful force we call life. Let the children make experiments with different kinds of soil—clay, sand, loam. In this way they will become familiar with the names and textures as well as the best uses of each.

Have the children notice the changes in the air; that it is hot in summer, cold in winter, dry in sunny weather, damp in rainy weather, calm, breezy, or very windy. Explain why we should be careful to breathe only good air, to breathe deeply and expand our lungs; that we live in the air as the fish live in the water; that birds fly up and down in the air as fish swim up and down in the water; that air is all above us just as the water is above the little water animals that crawl on the bottom of ocean or river.

Every child is familiar with water in many forms, but perhaps the wonders of its forms are so common that he has not noticed how miraculous they are.

We cultivate the imagination of our children by tales of the prince who became invisible when he put on his cap of darkness and who made far journeys through the air on his magic carpet, and yet no cap of darkness ever wrought more astonishing disappearances than occur when this most common of our earth's elements disappears from under our very eyes, dissolving into thin air.

What child has not noticed the steam rising from the damp pavement when the sun comes out after a shower? The drops of water are donning their magic caps and flying off into the atmosphere to become invisible to our eyes. The next time we see them it may be as part of the white cloud sailing across the blue sky. Then there is the magic power which brings back the vapor spirit to sight and touch. This magician's name is Cold or Jack Frost, who transforms our water drops again and gives them many fancy shapes, such as may be seen on frosted windowpanes, or shallow ice, or in the snowflakes.

When the child sees so many things smaller and weaker than he, all doing something and making something, he, too, longs to join this busy world. He may well use such occupation as cutting, pasting, weaving, and modeling, for the birds, trees, and spiders, in their way do all these things, while the flowers are painted with colors taken from the sunbeams and from the earth.

Stories of animals and insects may be appropriately told to emphasize the nicety and exactness of work done by creatures so much more helpless than we, and in this way a desire to do good and accurate work will be stimulated.

Article XXVII.

"COME, LET US LIVE WITH OUR CHILDREN."

By Mrs. Ethel G. Young.

I am a mother of three children—Betty, aged 6; Bob, 4; and Jack, who is 2. Up to the time Betty was 4 years old she had always been a very nervous child and needed constant entertaining. I hesitated to send her to kindergarten, but after reasoning with myself I finally decided to send her. The concentration required in the two years she spent in kindergarten made a different child of her, and she can amuse herself now for many hours at a time.

Bob entered kindergarten about three months ago. He is a quiet child and needs to be brought out of himself. He seems to be getting needed help in the kindergarten, for, in the short while he has been there, he has become more talkative and active. He now enjoys being with other children, whereas before he preferred to play alone.

There is nothing more necessary in bringing up children than to have them feel that we are interested in them. Try always to answer their questions. If you can not satisfy their curiosity they will surely go elsewhere for their information. When the children come home from school I ask what they did, what song they sang, what pictures they looked at, etc. They live the two or three hours spent in kindergarten over again by telling me what they have done. I had to leave the children for a week not long ago. When I returned they could not talk fast enough to tell me all that had happened. The habit thus formed of caring to share their experiences with you is a great safeguard as they grow older.

A story at bedtime is always welcomed by the children, and I find that it is not only enjoyable and beneficial to them, but also to myself. They never tire of good fairy stories. Nature stories are always interesting, too. My children will choose the same stories over and over again until they almost know them by heart.

Several nights ago I was called away and could not read a story, so I promised one for after breakfast next morning. When breakfast was over and I thought of all I had to do, it seemed as if I were wasting time to sit and tell stories. However, as the children became absorbed in the story and their happy faces looked up into mine, I realized that time could not be better spent. The story was that of Hans and the Four Big Giants, the keynote of which is helping others. I knew that the children had absorbed the point of the story when they helped me afterwards to clear the breakfast table.

The kindergarten is a great help in making children independent. Each child is taught, gradually and in a playful way, to help himself. In a class of 40, John does not like to be the only one who can not put on his rubbers or button his coat. Perhaps you will say you can teach independence at home. Granted, you can. The trouble at home is that we too often do too many things for our children. At home, too, we lack the group work so beneficial in the kindergarten. It develops the social side of a child as well as his ability to be of service.

Orderliness is another aim of the kindergarten. It should also be the aim of every household. In kindergarten all the material is kept in order. It is given out and collected in an orderly way, and each child is taught to pack up his material after he has finished with it. There is always a place for everything in the kindergarten, and the child learns to put everything in its place.

If your child is not orderly at home, do not blame him until you first put yourself in his place and see if you are expecting the impossible. We have discovered in our family that by making things convenient the children will keep things in order. In our coat closet we have a box for rubbers and another for toys. We have put within reach two hooks for each child's clothing. On the door there is a bag of several pockets for gloves. Even the 2-year-old boy puts his things away and I have never taught him to do so. He learned by observing the others. Just the other night he cried while I was undressing him because he remembered he had not put his train away. Let each child have a separate place for his toys, for they so enjoy being owners. If one is neat and another careless, it would be very discouraging for both to keep their things together.

Not long ago I spent a most enjoyable afternoon coasting with the children. A neighbor who saw me said, " You surely are a child with your children." She unconsciously paid me a compliment. If I can only make my children feel that I am interested in everything they do, I am certain I will have and keep their confidence.

Article XXVIII.

EVERY CHILD INSTINCTIVELY DESIRES TO USE HIS HANDS.

By Dorothy Canfield Fisher.

So many of our American farmhouses are situated in very rigorous climates that a good many mothers will not think the out of doors a possible playground in winter time. This is less true than they are apt to think. On almost any sunny day in winter little children, if warmly dressed, will benefit far more by a brisk, romping, active half-hour's running and jumping than city babies do in their swathed, motionless outing in a baby carriage. And when really bad weather drives them in, as it should do very seldom, the country mother has a great advantage in space over the city one; for there is about a farm nearly always some corner, a woodshed, a corner of the barn, an attic, or an unused room where the little folks may romp and play actively. If necessary the sacred spare room is better used for this purpose than kept in idle emptiness. And all the varieties of handwork are resources for rainy days. For, as the children advance beyond real babyhood and mere need for constant romping and climbing and running like little animals, their instinctive desire to use their hands increases, and this is an instinct which should be encouraged in every possible way. Just as the wise mother sees to it that they are provided when babies with ample chance to roll and kick and tumble, so when they are older she is never more pleased than when they are doing something with their hands; and she has all around her ample material for beginning this handwork. A pan of beans or shelled corn, with a wide-mouthed bottle and a spoon, will keep a 2 or 3 year old happy and absorbed for a long time. A pack of cards to be shuffled or used to build houses is another "plaything" which does not need to be specially bought. A pan of bran and a handful of clothespins occupy even a baby of 14 months as he pushes them into the closely packed bran and pulls them out. A big rag doll, the size of a small child, is easy to make and stuff with cotton. The most rudimentary scratches serve to indicate the eyes, nose, and mouth, and the lips and cheeks can be colored realistically with any red jelly. All children love a big doll of this sort, and delight to dress it and undress it in their own clothes. They learn in this way to handle buttons and buttonholes, and to master the difficulties of shoes and belts and sleeves. A new corncob pipe and a small bowl of soapsuds means harmless fun for the 5 year old, which is always watched with rapture by the littler ones. And then there are blocks, perennial blocks, which do not need to be bought from a store. A father with a plane and a saw can plane a couple of 2 by 4 stocks and in about half an hour make as many square or oblong blocks (2 by 4 by 6 inches is a good size) as any child needs to play with. These large blocks not only cost practically nothing, but are much better for the little children to use than the smaller, expensive kind that are sold; and the set will outlast a family of most strenuous children.

A collection of empty spools of different sizes is a treasure for the child of 3, who will rejoice in stringing them on a cord passed through a bodkin. When he is a little older and has learned skill in this exercise he may graduate to stringing buttons with a real needle and thread. On baking day a small lump of dough (made less sticky by working more flour into it) which can be rolled and played with on a bit of smooth board is great fun for little folks; and let the mother constantly remember that any fun which is secured by using the hands does not only make the child happy, but is of educational value.

On washing day a basin of soapy water and some bits of cloth to be washed out will fill many happy minutes. The oilcloth apron is as indispensable for this play as for the outdoor water play and for clay modeling. This last is perhaps the most eternally interesting of the indoor occupations for little children. If the clay is kept on a bit of oilcloth on a low table, it is not an untidy element in a kitchen.

If dried peas are soaked for a few hours they are soft enough to be pierced by a needle and can be strung by 4 and 5 year olds into necklaces and bracelets, or they can be put together with wooden toothpicks into many fascinating shapes. Dried watermelon and sunflower seeds can be used in the same way. A box of dried corncobs can convert a free corner of the floor into a farm with log-cabin house, rail fences, and barns. Trees can be simulated by twigs stuck into bits of clay to hold them upright, and farm animals can be rudely fashioned out of clay, dusted over with domestic coloring material to make them realistic—flour for sheep, cocoa for brown horses and cows, charcoal for black animals, and then baked in the kitchen oven to make them firm.

A rag bag into which the children may dive and delve is a resource for rainy hours, and if the mother is at hand to keep an eye on the process and tell what colors and materials are, to suggest matching those colors and stuffs which are identical and to make agreeable combinations with others, rag-bag hour is as educational as any exercise in a carefully run modern school. The country mother has here again a great advantage over many city mothers in that her work is always at home, and of a nature which allows her to supervise the children's play without giving up all her time to them.

Provision should be made in the case of little children for their desire to handle all sorts of objects; the desire which makes them enjoy so greatly a tumbling over of mother's workbasket. There is no need to let them upset that when there are in every country house such a vast number of other articles which are not hurt by baby hands—spoons, tin pans, boxes, tongs, clothes baskets, and darning eggs. Furthermore, instead of being told "Don't touch," they should be encouraged to learn how neatly and competently to perform such ordinary operations as opening and shutting drawers and doors and boxes and gates, screwing the tops on cans, hanging up clothes, and taking off rubbers.

Article XXIX.

A KINDERGARTEN FOR EVERY NEIGHBORHOOD.

By Mrs. Alice Wingate Frary.

Any mother who wants to may learn something of the underlying principles of the kindergarten by securing a copy of "Mottoes and Commentaries of Froebel's Mother Play" (D. Appleton & Co., New York, publishers, $1.60), or by subscribing to a kindergarten magazine. The latter will be found especially profitable, the leading articles furnishing solutions to daily problems, while the stories and the suggestions for handwork and games will often be as useful for the home as for kindergartens.

If a mother can select only one feature of the kindergarten to use in her home, surely the story-telling period would be the best choice. There are so many opportunities for stories at home. They will serve as oil to the machinery of bathing, dressing, eating, and can accompany ironing, the washing of dishes, hand sewing and the like. The mother whose mind is well stored with good tales will not lack for an appreciative audience. Neither mother nor child will know boredom, and empty, tired, fretful hours will be transformed into happy, healthful, tender times.

A kindergarten for the neighborhood should be the aim of every thoughtful mother. The public school is usually the best place to start a kindergarten, as it is most likely to provide complete equipment and well-trained directors. Until a sufficient number of these are established, however, private classes fill a real need. Where the number of pupils does not justify a kindergartner in establishing a fully equipped school in a room of her own, the mothers may meet her half way. Such an arrangement has been successfully carried out in many localities.

Five mothers in a somewhat isolated community applied to a training school for a kindergartner to come into their homes. One mother collected the tuition, two alternated in giving up their dining rooms for the class. The dining table and chairs were used for the tablework, while each child supplied his own small chair for the circle. The piano in the living room was placed at the kindergartner's disposal. Conditions were not ideal—low tables are preferable to high ones, floors showed the wear from marching and games, the kindergartner at times found a suitcase cramped quarters for her materials. And yet in spite of all these drawbacks, children, mothers, and teachers were happy for three years. The right spirit was there and the children developed to a marked degree under its influence.

Singing with the children, playing with them with an eye to their development as well as their pleasure, watching and discussing out-of-door happenings, and always, in season and out of season, stories, stories, stories, will assist materially in bringing the kindergarten spirit into the home.

Article XXX.

PLANTING A GARDEN MORE FUN THAN PLAYING HOUSE.

By Mrs. Bertha Lewis.

No matter what the child's after life is to be, he should have the opportunity at least once in his life to experiment with plants. The plant, which sets its feet in the earth, lifts its head toward the sky, extends its arms to the air and sunshine and gives lodging to the creatures of earth and air, is a powerful factor in the life of man. Our whole aim in encouraging gardening must be to help the child realize that at his feet Mother Nature has set a prize, which, rightly appreciated, will answer all his needs and afford him the purest pleasures of life.

God gives to plants their life, their laws of form, color, and number of parts. The child creates his garden; it is the work of his hands, the expression of his mind. He arranges it according to his fancy in regard to color and position. He chooses this or that for reasons which appeal to him. The child may be taught in a simple way that as God observed order in the universe as His first law, giving to each form of life its place in the world, so order in the garden is the first necessary step to secure growth and development of life within it.

The child likes a comfortable bed to sleep in, a clean house to live in, a comfortable meal when hungry, a drink of clean water when thirsty. In the same way, the little seed likes a soft, comfortable bed in which to lie. Therefore, the earth must be well cultivated, sifted, and raked. The bed must be nicely made, with edges smooth and even. Then the seeds must be placed in even rows, not too close together, or they will crowd each other out. After the seeds are well up, the garden, which is their home, must be kept clean, all weeds, sticks and loose stones being removed. The earth must be rich enough to supply food to the growing plants and plenty of clean water given early every morning and, if the day is hot, in the evening also.

If the child's garden is made and tended with care and love, the plants will repay him by blooming and growing. No little child can be comfortable and healthy if given water and washed and cared for only once in a while. So it is with the child's plants; to be healthy and happy they must receive daily attention for a few minutes at least, for plants, like children, respond to love and care.

One reason why gardening makes a good beginning for nature study is that natural instinct usually points the way to garden making in the spring. Another reason is that so many forms of life are manifest in the garden and that occupation out of doors is very essential to the building up of a sound body, mind, and spirit, to the exercise of all the senses, the quickening of the emotions and an all-round healthy development.

Froebel, the founder of the kindergarten, adds that children learn through gardening much that helps to develop character and the contact with the power that is greater than man.

Oh, Painter of the fruits and flowers,
  We thank Thee for Thy wise design;
Whereby those human hands of ours
  In nature's garden work with Thine.

Give fools their gold, give knaves their power,
  Let fortune's bubbles rise and fall;
Who sows a field or trains a flower
  Or plants a tree is more than all.

For he who blesses, most is blessed,
  And God and man shall own his worth
Who toils to leave as his bequest
  An added beauty to the earth.

Gifts that grow are best;
Hands that bless are best;
Plant—Life does the rest.

Article XXXI.

ALL LIVING THINGS APPEAL TO THE VITALITY OF THE CHILD.

By Mrs. Bertha Lewis.

We are all aware that for some years past there has been an ever-increasing demand among educators for a better understanding of things from the things themselves by actual experience, instead of merely through book knowledge.

Songs and stories about nature, for instance, though they are very necessary and a very beautiful part of work with children, are not nature study, but merely a means of emphasizing the things which have been observed by the child, and of aiding him to express his thoughts of these things in simple, beautiful language, motion, and rhythm. Each new song or story about the object under observation is the opening of a new door into the world of nature and should lead to fresh observations.

There is nothing more dead to a child than a preserved specimen. Nature study deals with life, and life appeals to the vitality in the child. If a specimen is used, be sure it is a live one or a good picture (the preserved specimen should be the result of the lesson, not the basis of it).

We live in a world of living nature. What do we know of the grass under our feet, the trees of forest and plain, the insects whose apartment houses fill the dead twigs, the birds which nest in the woods and fill the world with music, the stars overhead, clouds, rain, hail, wind, mist, dew, or the sun which shines over all? The study of nature has to do with living things, or things that are doing something. The stars are twinkling and making light. The snowflakes are falling, making patterns and bringing us messages from fairyland.

The birds are hopping, flying, singing, building nests, laying eggs, and feeding their young. The worms are crawling and ploughing the ground and so helping to make things grow. Pussy is our pet; she is good company and will play with us and purr when happy. The dog is our friend; he guards the house at night and will run, jump, and do tricks for us, bark, growl, howl, and scratch. His body must be made strong so he can chase away his enemies or ours, jump for his food, bark for joy, growl when danger is near, and scratch to dig holes in which to bury his bones. Why is his nose so pointed and why are his eyes so far back? Where does he live? How many legs, ears, and eyes has he?

The fruit, vegetables, and flowers are all growing and varicolored. The fruit and vegetables are good to eat and help us grow. The flowers are fragrant and beautiful.

Nature study will help the child to make simple, truthful observations upon the things about him, to appreciate the beautiful in them, and to express his thoughts in his various activities.

The habit of accurate observation is very important. Some authority has said that there are few errors which arise from willfulness, compared to those which arise from want of care and exactness in noticing things quite easily noticeable.

In the study of nature—

1. Do not try to teach too much in one lesson.
2. Let the child examine the object if possible.
3. Lead him to notice first the characteristic features and qualities of whatever is under discussion.
4. Remember that children are more interested in what things do than in their form.

Let the child examine a little plant—seed, root, and all. Lead him to observe that it does something; it pushes its roots down and its stem up; it eats and drinks, breathes, sleeps, and wakes.

It makes things—leaves and flowers, seed, and fruits. Incidentally notice the form and color that these activities give to each individual plant.

Nature study need not be dull or difficult; it provides plenty of life and action. It is mostly our own interest that is dead or our senses that need quickening.

Grasp a few fundamental principles, and nature study in the home, in the kindergarten, and in the school will become the children's delight, the teacher's friend, and occupation for the nursery to help start the youngsters in busy work as well as a daily delight when walking out.

Article XXXII.

MOTHERS' PROBLEM: TO PROVIDE CHILDREN WITH SOMETHING TO DO.

By Dorothy Canfield Fisher.

A well-known doctor has suggested that every person, once in his life, should be prevented by force from drinking a drop of water for 24 hours, in order that thereafter he might appreciate what free access to water means for health and comfort. On the same principle it might be a good thing if every country mother should be obliged to spend a month with her young children in the city, so that she might thereafter appreciate what splendid opportunities lie all about her country home. For the poorest, busiest country mother can easily have conditions and materials for which many a highly trained kindergarten teacher sighs in vain.

Perhaps the greatest of her privileges is the wonderful resource of having all outdoors, but this is a privilege which the mother of young children is apt to neglect. She herself must be in the kitchen or near it during much of the day, and she must have her babies where they are within sight. It often follows that little country folks spend almost as much time hanging drearily around a kitchen, where they are in the way and where the air is not good, as do the city cousins. What else can the busy mother do?

She can apply to her children the lore she has learned about little chicks. Her men folk, hardened to fencing long stretches of field and meadow, would laugh at the ease with which a little square of yard outside the kitchen door can be inclosed. Fencing which is not good enough for chickens will keep little children safe from automobile-haunted roads, from wandering cows, from running out of sight of their mother's eyes. And there is no farm in the country where there is not enough discarded fence material of one kind or another lying about to inclose a spot, say 20 feet square, though it might be larger to advantage. It is better if there is a tree to furnish some shade for hot days, but if there is none near enough to the house, a piece of old paper roofing, or a section of old corrugated iron roofing, or some old boards with odds and ends of shingles put over them, will furnish shade in a corner of the baby yard for hot days and protection from the rain during summer showers.

Now, with her little ones foot free and yet in security, out from under her feet in the kitchen, and yet close at hand within sight and hearing as she steps about her daily work, the country mother can take counsel what to do next. The very next thing to do is to learn by heart a short and simple maxim, and to repeat it to herself until she has absorbed the essence of it into her very bones. The maxim is: "Little children wish and need to be doing something with their bodies and hands every minute they are awake." The problem faced by every mother is to provide them every minute with something to do which can not hurt them, which will help them to grow, and which will not be too upsetting to the regularity of the family life.

Now, the country mother has at hand a dozen easy and satisfactory answers to this problem for every one which is available to the city mother. To begin with, if a load of sand is dumped in one corner of the baby yard and some old spoons and worn-out pails contributed from the kitchen there will be many hours of every day during which the fortune of a millionaire could give the little folks no more happiness. Such a child yard with sand pile in it costs almost nothing in time, money, or effort, and no words can express the degree to which it lightens the labors and anxieties of the mother. And yet one can drive 100 miles in rural and village America without seeing an example of it.

Now, this plain, bare provision for perfectly untrammeled running about is in itself a better fate than befalls the average child under 5, and this much can be attained by any country mother with less effort and expense than a yard for poultry. But this can be varied and improved in innumerable inexpensive ways until conditions are almost ideal for little children. A piece of planed board can be nailed upon four stout sticks driven into the ground and another on higher sticks put before it, and the little folks will have a bench and table which cost, perhaps, 20 cents, and are as serviceable as the pretty kindergarten painted ones which cost ten times as much. Potter's clay can be bought for a few cents a pound and for a variation from sand-pile plays young children turn gladly to clay modeling. If the mother has time and ability to supervise this carefully, so much the better, but if she is so busy that she can only call out from the kitchen stove or washtub a cheerful suggestion to make some little cups and saucers, or a bird's nest and eggs, this will serve very well as a beginning. If the clay is kept where it can be obtained easily, it is possible that one or more of the children may show some stirrings of native ability and begin to try to reproduce the animal life of the country.

If the country mother has followed these suggestions she has now, with small trouble to herself, put at the disposal of her children the two great elements of air and earth. There is another one, almost as eternally fascinating as sand, and that is water. If four strips of wood are nailed in the form of a square at one end of the little table and a pan half full of water is set securely down into this square so that it will not tip over, another great resource is added to the child yard. With an apron of oilcloth, a spoon, and an assortment of old tin cups, odd jelly glasses, and bottles, it is an abnormal child who is not happy and harmlessly busy for a long time every day. Any ordinary child over 14 months of age loves to play with water in this way and learns steadiness of hand and sureness of eye which go a long way toward insuring agreeable table manners at an early age. As he grows older a fleet of boats made of bits of wood or walnut shells vary the fun. A little apron can be manufactured in a few minutes out of 10 cents' worth of table oilcloth. If the mother is very busy she can fasten it together at the shoulder and back with safety pins. A single apron should last through the entire babyhood of a child.

Children under 4, often those under 5, are too small to "play house" as yet, but they delight in climbing, and, if possible, provision should be made for that. A wooden box can be set a little down in the ground, so that it will not tip over, and the edges padded with a bit of old comforter so that the inevitable bumps are not so severe. The smallest of the little playmates, even the baby who can not walk, will rejoice endlessly to pull himself up over the edge and clamber down into the box, thereby exercising every muscle in his body.

Little children can not coordinate their muscles quickly enough to play ball with much pleasure, but if a large soft ball is suspended by a long cord, they can swing it back and forth to each other with ever increasing skill; and they should have a rubber ball to roll to and fro on the ground.

A small wooden box with one side knocked out makes the best seat for a swing for small children. The three remaining sides make a high back and keep the child from falling. If this is swung on long poles instead of ropes there will be no side-to-side movement and little children will be safeguarded from falling out sideways. If the support for a seesaw is made very low even children under 5 can enjoy and benefit by it in acquiring poise.

If a 2 by 4 board is laid on the ground the little folks will find much fun in trying to walk along it and acquire thus a considerable addition to their capacity for walking straight and managing their bodies.

A bit of hanging rope with the loose end within easy reach will mean a great many self-invented exercises in balancing, and will give a certainty of muscular action which will save the child from many a tumble later. A short length of board, perhaps 4 feet long, propped up on a stone or bit of wood, with one end fastened to the ground, furnishes a baby spring board which will delight the child from 3 to 5. A pile of hay or straw to jump into will save the little gymnasts from bumps and bruises, and marsh hay will answer just as well as the best timothy. This simple set of apparatus may be completed by a short, roughly built ladder, with the rungs a short distance apart, set up against the house, with a soft pile of hay under it. This furnishes the little folks the chance to indulge their passion for climbing things, which is so dangerous when directed toward the kitchen table or bedroom bureau.

Nothing in this baby yard need cost a farmer's family more than a few cents, nor take but very little time and almost no carpentering skill. And yet the suggestions made cover a very complete outfit for the outdoor exercises of children under 5 or 6. Any mother who secures the simple apparatus here described may be sure not only that her own little children will pass numberless happy hours but that they will never lack for playmates, because their play yard will be sought out by all the little folks in the neighborhood.

Article XXXIII.

BASE EARLY EDUCATION ON SOUND PRINCIPLES OF CHILD STUDY.

By Mrs. Winifred G. McBroom.

For those who intend to teach little children of 4 and 5 as a profession, a training in kindergarten methods is required by law in practically every State in the Union. Why is such training not equally necessary for those whose future work will probably be home making? The broad principles underlying kindergarten training have been thought out for us by many great educators and philosophers of the past and present, and these principles will help the individual parent as well as the teacher to interpret his surroundings, to form a wiser attitude toward life, and to love and understand children. Such an education is almost indispensable to mothers who would give to their children the best of all opportunities—the opportunity to grow aright. But if, as mothers, we can not have such training or can not send our children to kindergarten, let us plan their early education in the home so that it will be based as far as possible upon sound principles of child study.

The child between the ages of 3 and 6 years is very impressionable, and upon his early experiences must be based his whole future education. Therefore it is important to see that he receives only right impressions and has only right experiences.

The child is and should be constantly handling objects and constantly inquiring about them. Such inquisitiveness is the greatest aid to education. How many interesting sights we pass over because we lack the keen observation of a child. "He who is interested in much has in advance a great advantage over the indifferent person and remains younger even in age; whereas the indifferent becomes old in the seasons of youth."

Let the child live with you. This is not easy for a busy farmer's wife such as I am. It does not mean, "Keep out of my way while I mix this bread." It means, "Roll up your sleeves and wash your hands. Now dip out four quarts of flour for me." Perhaps some of the flour may be spilled, but only by using the hands will the child learn motor control. What if the biscuits are not all smooth? By making three rows of four each, he will be learning valuable number facts.

The child may ask, "Why is the flour white? The wheat is not white." This question brings out the whole story of bread. Don't merely tell it; see it if possible—the wheat seed, the growing wheat field, the reaping and thrashing, the flour mill, the bakery. Enrich the child's experience with pictures, stories, and songs relating to this subject, and after this a slice of bread will be an object of new interest to the child.

Tell in the same way about the strawberries that he eats with his bread. Where do they come from? If you can not show him the growing plants, find a picture or draw one so that he may not say, as a lady of my acquaintance did, "I've always had such a desire to see strawberry bushes."

City children ask, "Why is there a picture of a cow on the butter paper?" If you can not visit a dairy or a creamery, buy a gallon of milk and let the child skim it and churn the cream into butter with the egg beater. Then after he has salted it, let him eat some on his bread. My country children ask, "How did the firemen know there was a fire?" Their father took them to the fire house to see the alarm bell and the boots, clothes, and brass pole ready for the night alarm.

When fathers go to the field to see the oats planted, they should take their 5-year-old boy or girl along and tell the story of the growth of the seed.

On the way for the cows, sharp eyes may find a badger hole or see some muskrats in the creek.

Is all this education? The beginnings of education are started in and about the home in the child's attitude and reaction toward his environment. All the time he is learning to see and hear and to think. The child whose mother and father live with him is sure to store up experiences and be able to compare and relate them later, to be observing, to be constructive (which is the only remedy for destructiveness), and to be able to express himself as well as to have something in his mind to express.

In play children are constantly educating themselves. They are learning to direct their attention and their motions persistently toward a definite end. We can suggest plays and tasks which will train the eye to see quickly and teach the colors, directions (front, back, up, down, right, left); the points of the compass, the time of day, and the days of the week. My little 4-year old learns much as she sits beside me at the sewing machine. She arranges my drawer of thread, learns the colors and plays a game, guessing which color is gone from a long row of spools.

A set of colored kindergarten balls, a box of crayons, or later a box of paints make an excellent Christmas gift and aid in color training. Colored papers and a small pair of scissors will occupy many a stormy day profitably. The mother who is at all musical can train the ear to detect high and low tones, loud or soft bells, and music for marching and skipping. Have the child bounce a large ball to music or clap to music. This will help him to gain motor control. Play dominoes with him. Suggest "hide the thimble" or "blind man's buff" or "cobbler." All these games help to train the eye, the ear, and the hands.

I will not dwell upon the moral training of children, for mothers seem to consider that their duty, even though they may not think it necessary to train the mind. The right idea of preparing a child for school is not to teach him reading and writing unless he is past the age of 6, but to give him many and first-hand experiences which will train his senses and make his mind and body active and able to express his feelings.

Article XXXIV.

LET US NOT CRIPPLE OUR CHILDREN'S SELF-DEPENDENCE.

By Mrs. Alice Barton Harris.

I sometimes wonder what the city child is able to show in the way of self-dependence and initiative when the inevitable day arrives that he must stand on his own feet. It seems to me that he is never left alone. In well-to-do families he usually passes from the teacher's hands directly into the hands of his governess or tutor, who instantly assumes the responsibility for his safety and well-being. He works and plays under supervision, and has no opportunity to develop initiative or a sense of responsibility. In the name of education we are crippling what we should cultivate. The best way to develop initiative is to let the child alone for at least a part of each day. I think it shows an almost insulting lack of faith in his intelligence, this constant attendance on him. Even if he does make a few blunders, he will be developing himself that way.

My husband and I were brought up in all the freedom of large spaces and after a few years of New York apartment life, with summers in boarding houses, we realized that our boys were going to lose out on most of the joys of childhood unless something was done about it. So we bought for almost nothing a 100-acre valley, 2,000 feet up in the Catskills and 500 feet above the nearest village—a real wilderness into which no self-respecting servant would dream of setting foot. There was a rough little cabin in it, which was quite adequate for a summer home. Our object was to have a place where the children could stretch their bodies and souls, and incidentally where the parents could also; where light and heat and water did not come by means of taps and buttons.

We had to do all the work ourselves and the boys, then 5 and 6, were expected from the beginning to do their share. They fetched the milk from the nearest farm, a half mile distant, realizing fully that if they did not get it there would not be any milk, a crisis which could not exist in town. We have most of our dinners outside, over a camp fire, which, of course, the boys soon learned to make. They often serve us doubtful meals, over which they labor joyfully for hours beforehand. They have absolute freedom to wander over the mountains with only their dogs for protection. There are hours and hours when I have no idea where they are, and they come home with the most wonderful adventures to recount. For four months out of every year they live the life of the pioneer boy.

I think every city child should have some such summer experience if possible, where responsibilities can be given him which he may assume or not, but where he must take the consequences. The child brought up under artificial conditions necessarily prevailing in city life, or in the summer hotel, has no point of contact with the old, simple, universal forms of human living, from which all wholesome developments took their root.

Article XXXV.

BRAVERY IS NATURAL; FEAR IS INCULCATED.

By Mrs. Alice Barton Harris.

The ideals which we wish to develop in our children are chiefly those of courage, truthfulness, and unselfishness. I believe that the normal child is born brave, physically and morally, and that out of laziness or ignorance the grown people put fear into his little consciousness. He isn't allowed to climb, for instance, because his mother is afraid he will fall, and his plastic mind is filled, through stories or threats, or actual punishment, with a sense of danger and evil with which he in his helplessness can not cope.

Lying, of course, comes from the same source. The child lies because he is afraid, either of being misunderstood or punished. Thoreau says, "It takes two to speak the truth; one to speak and one to listen." When the child lies, the burden of the lie too often rests upon the grown people who have him in charge.

Many persons believe that fear is inevitable to man; that it is a race memory; but I believe that fear of the dark, of solitude, is much more likely to come from mind pictures of terrible things which unwitting elders have discussed in the child's presence, or as a result of unwise reading or story-telling in very early childhood. This is difficult to avoid perhaps, but quite possible if parents are willing to be sufficiently watchful. The magnificent trust with which a child thus guarded can face the world is a guarantee in itself of success in life.

Unselfishness is one of the virtues which has to be cultivated, for we are not born unselfish. We have to be taught this virtue and of course, the greatest teacher of all is love. I am inclined to think love is the only teacher. Henderson says:

> To get children interested in impersonal things is to make them unavoidably unselfish. Solitary children, only sons and daughters, are as a rule extremely selfish, for the simple reason that their lives have been so overwhelmingly personal. The way out is through group activities on the part of the whole family, through pleasures as well as through service. If life is to be permanently successful, and happiness genuine and secure, the major interest must be impersonal, must have to do with something bigger than the little self, must concern itself with the abiding and universal things.

Article XXXVI.

SEVENTEEN USEFUL RULES FOR MOTHERS.

By Mrs. Gertrude H. Campbell.

Many mothers have asked me, "Do you find that your kindergarten training really helps you when you are dealing with problems in your home?" My answer is invariably, "Yes."

Two years of thorough and stimulating training in Froebel's wonderful methods for teaching little children and several years of trying to put those methods into practice could not fail to give a mother a more intelligent and spiritual grasp of the meaning of her children's activities.

Thinking back over the past years I have been trying to formulate some of the practices that have helped me over the hard places, and offer the following to the mother who wishes to make of her children's early years a period that they and she will remember with great joy:

1. When it is necessary to restrain a child from doing something wrong or harmful, always suggest something else he may do. Never issue a don't without proposing a do.

2. In giving a child permission to play take care that his activities do not develop into license. For he will be happier if some limitations are imposed to test his powers and help him concentrate. For instance, if he is playing with blocks or cutting from paper, giving him permission to do anything he pleases often results in aimless or destructive activity. Some suggestion from the mother to make something—to furnish a house, for instance—stimulates and directs his mind, while leaving him free to express himself.

3. Before a command is given always consider whether it is going to raise an issue. If a child refuses to obey, do not always insist upon implicit obedience; your command may not have been an entirely wise one. Punish for disobedience, if necessary, but do not raise avoidable issues. "Breaking a child's will" is cruel and most harmful.

4. When a child is naughty always be sure that the cause is not a physical one, for fatigue and hunger come easily to little people. Many problems that are unsolvable before a meal are no longer problems afterwards.

5. Try to follow your children's activities and to understand the instincts and inner laws from which they proceed. View what they do in the light of your intelligence and of your spirit. Such a habit of watchfulness and care prevents nervous irritation and enables you to enter into and to encourage sympathetically activities which are pleasing.

6. Be consistent in what you approve and disapprove. Do not one day, because you are tired, reprove a child for something he had done and the next day ignore the same thing because you are rested.

7. Answer questions truthfully. A child's mind does not always crave details. Give him only broad statements. Build a strong foundation of truth, to which details may be added later. As regards the vital question of the origin of life be careful not to give the child more than he asks for. Do not force your buds to open too early. The life of flowers and birds is analogous to human life and will tell you how to answer this question.

8. Avoid useless negations. If there is no real reason why a child should have his requests denied, do not deny them.

9. In regard to children's interruptions, consider whether what they want you to do is not more important than the special activity you had planned for that moment. In the last analysis, why do we mothers exist at all if not to give of our best to our children and to meet their needs as they show themselves?

10. The care of a child's body is important, but it should not monopolize the mother's attention at the expense of mind and spirit.

11. Cultivate a sense of humor in yourself and in your child. It is wonderful how many trying situations may be relieved through this means.

12. Show a child the same respect you would a grown person. What a child resents most in being struck is not the pain, but the insult to his pride.

13. Do not leave your children largely to the care of nurses, however conscientious or seemingly intelligent they may be. Nurses minister mostly to the physical needs of little children, and the time soon comes when they are no longer necessary for this purpose. Then it may be too late for the mother to build the bridge of sympathy between her children and herself. Moreover, it is in early years that the child is most impressionable and that a mother's influence may count for most.

14. Do not threaten. Make punishments slight, but see that they always follow the offense. Their effectiveness depends upon their inevitability, not on their severity. A child keeps his fingers from the flame because he knows it will always burn him.

15. A child that is occupied is always a good and happy child. For outdoors, try to have a sand box, a swing, a garden and garden tools, and let this be a spot where the children hear the word "don't" as seldom as possible. For indoors, provide modeling clay, paints, a soap-bubble outfit, blocks, crayons, colored paper, blunt scissors, colored wooden beads, shoestrings for stringing, and pegs for peg boards. (Beads, pegs, and peg boards may be procured from Milton

Bradley Co., Springfield, Mass., or E. Steiger & Co., 49 Murray Street, New York. Both companies will send a catalogue upon request.)

16. Since you are constantly supplying your child with mental and spiritual food, see that your own mind and spirit are kept renewed and inspired by good books, fresh air, poetry, change of scene, stimulating companionship, good pictures, and music.

17. And remember, your child came to you with the divine spark. He is for you largely to make or mar.

Article XXXVII.

BEGIN EARLY TO FORM THE HABITS OF YOUR CHILD.

By Mrs. Edith Clark Cowles.

From the instant a mother hears that first significant cry which proclaims to the world the birth of a new life, she is confronted by a problem which increases in complexity with the passing of the years.

If she is a busy mother—and most mothers are busy—she will soon realize that upon the early habits of her baby will depend her ability to fulfill her many duties. She can train the baby to be entirely dependent upon her during his waking hours, and thus let him become the spoiled child who later develops into a family nuisance, or she can begin even when he is in his tiny crib to sow the seed of self-reliance, which will make of him the responsible and desirable citizen. She would not be guilty of pulling up the sprouting plant to see if it was growing; why carry her baby about in her arms or hold him in her lap when he can kick and crow so much more freely in his own bed?

The baby who is bathed, fed, given his nap regularly, allowed freedom in which to grow, and not hampered by too much attention will develop into a healthy, happy, helpful child, and be a joy to his parents and a pleasure to their friends. The Children's Bureau at Washington furnishes, upon request, bulletins relating to the food, general care, and physical training of the infant.

As baby's mind develops he will need diversion and amusement. For this purpose toys are useful which do not have sharp edges and which can be washed and kept sterile. A bell or rattle for the baby to kick may be hung from his crib or carriage, but it must be hung at an angle which will not produce eye strain.

From earliest infancy the child displays a spirit of investigation which it is well always to gratify. If possible, never leave his questions unanswered. If you lack the information, say that you do not know but will find out and tell him; and keep your word. Few parents realize that they typify to the child the spirit of omniscence which God typifies to them, and that it behooves them constantly to strengthen such faith. The child who finds that he can depend upon what his parents tell him is less apt in his turn to deceive them, and the seed of mutual understanding and confidence is thus sown, to sprout and bloom for all time.

The spirit of investigation often leads children into the habit of touching every object they see. This is not always naughtiness and should not be so stigmatized. A baby's attention can be diverted from one object to another, while older children will desist from investigation as soon as their curiosity is satisfied. But if they are told unqualifiedly that a certain object must not be touched, they seem impelled by an irresistible force to handle that object in preference to all others. It is well to keep in mind the advantage to be gained by positive suggestion. Divert the child's mind by mentioning something which he may do, rather than strengthen his determination by a peremptory command as to what he may not do.

Article XXXVIII.

MUSIC AN ELEMENTAL PART OF LIFE.

By Mrs. Jean N. Barrett.

Dear old Mother Goose, the patron saint of children's music! How much the children of our family owe to her jingles. I can very distinctly remember my father playing with us and trotting us to the rhythm of "Ride a cock horse," "To Boston, to Boston, to buy a penny bun," and "Little bow-wow to the mill."

No child, thoroughly imbued with these rhymes, will have any trouble in comprehending three and four part rhythms, with their varied subdivisions and accents. How much more delightful to have all this rhythmic instinct grow up unconsciously from happy playtime than to have it left until a child is old enough to be conscious of his lack in this respect and has to go through exacting and tiresome drills to overcome it.

Happy the child whose lot is cast in a joyous musical atmosphere! There is thus implanted in his inner being a something which will help him to go through many trials with a brave heart and an unconquerable hope and faith that this is after all a good world.

We constantly hear mothers say, "No, my children have no talent for music and I shall not bother to have them learn anything about it."

If I could feel that I had in all my life made a few mothers, a few teachers, understand the difference between music as a performance and music as a life element, and thereby gained for a few children this power which more than any other stirs the vital forces by which we live, I should feel that my share of life's troubles were a small price to pay.

A like misapprehension in the domain of art would banish from home and school the beautiful pictures and art forms which awaken a love of all that wonderful world of beauty revealed to the seeing eye and the appreciative mind, because, perforce, so very, very few children have any talent for drawing, painting, or modeling.

One of the first steps in rousing a feeling for music is to lead a child to listen. How much stress is laid in our scheme of education upon teaching a child to observe, to see; how little upon teaching him to hear. The eye is made dominant in all things and we lose much enjoyment which a trained sense of hearing might bring us. God made the birds beautiful, but He also gave them songs, so tender, so thrilling that the very breath stops that we may listen, as we sit at twilight near the home of wood thrush or song sparrow.

To the open ear is not the gentle, silvery murmur of the brook as it calls through the forest as keen a delight as is its crystal shimmer in a setting of green, when we have followed its call and found its home?

Let us not forget that the morning stars sang together, and that He who created them meant His children to hear their music in the melodies and harmonies of all His great creation.

The child brought up in the city hasn't the beautiful sounds of nature from which to get his first lessons in listening, but mother and kindergartner can make use of what they have. Even the scissors grinder and ragman help us out here. One of my little pupils, the daughter of musical parents, gained her first idea of imitating sounds correctly from a ragman's call. As we were having our lesson one day we heard this song come, I was going to say float in at the window, but the ragman's tones are rather too strenuous to be called floating tones: "Rags, rags, rags; any old rags or bottles." The tune can be written thus: Do si la sol sol sol do do, but no words can describe the quality of the tones. At once I imitated the theme and little Frances, to my great surprise, imitated me exactly, whereas before this she had hardly been able to get one single note correctly. His tune was unique and it appealed to her.

Lead the children to listen in every way you can think of. Tap on different substances—wood, glass, silver. You may find a lampshade that gives forth a definite musical pitch. Play tunes on tumblers, tuning them to musical pitches by varying the quantity of water in them and striking lightly with silver knife or spoon. This device I found most useful in arousing interest in music in a boy who seemed to have no musical instinct whatever.

A writer says: "The greater part of children's time is spent in elaborate impersonation and make-believe, and the entire basis of their education is acquired through this directly assimilative faculty." This applies most forcibly to music and gives to those who have the care of children almost unlimited opportunity for developing musical expression.

A lullaby song at the child's bedside at night is a benediction beyond estimate.

Article XXXIX.

HOW MUSIC HELPS IN THE LIFE OF THE HOME.

By Mrs. Jean N. Barrett.

A few instances of what has been done in some homes through the power of music will, I know, tell you more than the mere advancement of theories.

A little girl who was very miserable and managed to make mother or nurse most unhappy all through the process of hairdressing and getting into bothersome clothes, would submit most graciously if mother sang—

My mother bids me bind my hair
  With knot of fairest hue;
Tie up my sleeves with ribbon rare,
  And lace my bodice blue;
For why, she says, sit still and weep
  While others are at play?

an adaptation of Haydn's beautiful air.

Another mother learned to help her little boy work off some of his stormy fits of temper by going to the piano and playing some stormy, impetuous bit like Schumann's "Wild Rider." The boy did not know why this was done, but he felt the mood of the music because it exactly fitted his own, and he would career around the room like a veritable wild pony, until his emotion, which might have worked harm to himself and others, had spent itself in this harmless way.

My sister remembers that even as a child she recognized this power of music to bring sweetness out of temper. She was very angry one day with a sense of some injustice done her and in this mood started to play her beloved piano. As she did this she realized that if she played she would soon cease to be angry, and not being ready to give up her resentful mood, she rejected the gentle ministry of music and went to her room to nurse her unhappiness.

As an incitement to bravery music has often been used in the home. A little boy much afraid of the dark would go upstairs to a dark room for mother when she played a strong march for him as he went.

If mothers could realize how many times a bit of music would be of greater service than even the kindest remonstrance, they would have crashing chords ready for the angry boy, nonsense song to drive scowls from the face of little daughter, and jolly jig to set lagging feet and drooping spirits dancing; while a gay little tune improvised or adapted for the occasion, would often bring cheerful obedience in response to the request to pick up playthings or perform some other unwelcome task, where a stern command would start an unhappy time for all concerned.

One of my childhood memories is of visiting in a country home where the mother would often get up from the breakfast table and say, " Come, let us sing a little before we do the work." Bad housekeeping, perhaps, but good homemaking, for I have since learned that this method was always resorted to when the morning atmosphere of the home threatened to be gloomy or quarrelsome; and the singing never failed to drive away the clouds. Of course, this use of music is most effective with a child who is either endowed by nature with the ability to respond to musical influence or has been trained in ear and heart to feel its effects.

A child who has always heard good music and has early learned to love and produce it, has great advantage over one to whom it comes as a later and more foreign achievement. Responsiveness to the atmosphere of music is not, however, dependent upon the ability to create it, although of course, made stronger by it. A little 4-year-old child who had no natural ability for either singing or playing, being deficient in both rhythmic sense and sense of pitch, nevertheless was so sensitive to musical impressions that she described the tunes which were played to her as being pink and red and blue like the sky, and one which had strong chords with a staccato melody above them as the green tune with red berries. These interpretations of music in terms of color were later explained by the development of an unusual degree of talent with pencil and brush.

Another memory of my childhood is of a visit to a dear auntie, who, on Sunday afternoons, took her little visitor to the west pasture and amid the splendor of the sinking red sun read from a volume of sacred poems. The cadence of her sweet low voice will always echo through my memory.

It is truly a part of music's ministry to speak through the charm of a well-modulated pleasant-toned voice, lending itself freely to the various moods of the fine nature it serves. It is truly one of the duties of the mother and the kindergartner to be a model for her children in this respect as in many others, for children are very sensitive to voice quality.

While the kindergartner's opportunity comes later than that of the mother, she has the same responsibility to see that the children under her care are given the opportunity for "full and all-sided development," to use the words of Froebel, "to enable him to see man in the universality of his nature and particularly to enable him to understand and appreciate the products of true art." Many children will come to her without having experienced in the home any of the life of music which might have been theirs, and to her will fall the duty of arousing the first idea, of awakening the first emotion for sound.

Who that has ever witnessed the delight of a little kindergarten child in this new way of expressing his joy in life can doubt that music should be regarded as a beneficent influence in life, and not as an accomplishment to be cultivated only by those of more than ordinary endownment? When the kindergartner says, "Who will sing our new song for us alone?" how often it is the little fellow who can not yet carry a tune that eagerly responds, especially if mother is there to hear. If teacher and mother are wise, there will be no expression of suprise or dissent; for the right trueness or untrueness of the tune just now is nothing to the inner urge which makes the child want to express himself in this new and delightful way.

To sing the lilting measure when the heart is gay, to give thanks for cherished blessings in the glad hymn of praise, to send upon wings of song a prayer for strength to bear the burden and grief too heavy to be borne alone, this is what God's great gift of music should mean to us. Let us help the little children to enter into their heritage of song.

Article XL.

BEING A GOOD MOTHER REQUIRES UNDERSTANDING, DEVOTION, AND SACRIFICE.

By Mrs. Isabel S. Wallace.

The education of young girls should prepare them for the greatest work in the world—wifehood and motherhood—and I wish they could all have courses in home nursing, domestic science, and kindergarten training.

My training as a kindergartner taught me many things, among them keeping strictly to a schedule; so my baby was fed, bathed, and put to bed regularly. Habit is formed early in life, and can help to make or mar character, depending on whether habits are good or bad. This carrying out of a regular schedule was not always easy, for it meant sacrifice of many pleasures. But I wanted to be a good mother first of all, and I was rewarded by having a happy, good baby. Even now at 6 years old there is no fuss at nap time or bedtime. One of the things taught unconsciously in the kindergarten is regularity and promptness, and these can be taught in the home just as well.

Long before baby could talk she knew the little play for the fingers, "Here's a ball for baby."

Here's a ball for Baby,
Big and soft and round!
Here is Baby's hammer—
O, how he can pound!
Here is Baby's music—
Clapping, clapping so!
Here are Baby's soldiers,
Standing in a row!
Here's Baby's trumpet,
Toot-too-too. Too-too!
Here's the way that Baby
Plays at "Peep-a-boo!"
Here's a big umbrella—
Keep the Baby dry!
Here's the Baby's cradle—
Rock-a-baby by!

—*Emilie Poulsson.*

The ball is made with the two hands rounded together; the hammer by doubling up the hands and pounding, one or top of the other. Baby's soldiers are made by holding all the fingers up straight. The hands are clapped together for the music, and doubled up, one in front of the other for a trumpet. For peep-a-boo the fingers are spread in front of the eyes so that baby can see between them. The umbrella is made by placing the palm of one hand on the index finger of the other, and the cradle by putting the two hands together, insides of the palms touching and outer sides open.

As I said the words of this little play and made the motions, baby would try to make the motions, too. She also knew "Five Little Squirrels," "Good Mother Hen," and "Little Squirrel Living Here." Of course, she could not play them perfectly, but she loved them and wanted me to play them for her over and over.

Baby also loved music and even when very tiny would stop crying to listen to soft music. She has always loved stories also. First we took up "Mother Goose Rhymes." I would repeat them over and over to baby as I sat sewing and she played on the floor, and before she was 2 years old she knew a great many of them. She also knew the words of several little songs, such as "Rock-a-bye Baby." It was enchanting to hear her say them in her sweet baby way. I never actually taught her the songs, however, simply singing them over and over again.

Baby played with two other little girls from the age of 3 until over 4. One was younger and the other older than she. The two little girls did not have much home training, as their mother was a society woman and left the children to the care of a maid. They almost lived at our house. When the children grew quarrelsome I usually suggested a party. The little table and chairs were gayly set on the piazza, weather permitting, and milk, graham biscuits, and dates were served or grape juice and arrowroot biscuit. Sometimes an apple or an orange was carefully prepared for the occasion. Such a party always stopped the quarreling. Sitting down rested them and eating quieted them. Then after they had finished I left my work and told them a story. Oh, how eager their little faces were.

One day, the younger visitor, who was spoiled and selfish and consequently quarrelsome, was making things unpleasant for the other two. I entered the room and quietly took her on my lap. She knew she had been naughty and was a little afraid of me and also curious as to what was going to happen. The other two children watched with awe and wonder on their little faces. Very quietly I told a story my grandmother used to tell me about "Naughty Spotty." It made a great impression on them all, and, as I had foreseen, it was not necessary to say one word of direct censure to the naughty child.

Both of our little visitors were story hungry. Their mother said she could not tell stories. By reading a story over several times and getting its meaning and spirit, anyone can tell a story. Don't be afraid to put expression into your voice and face. No stories should be told which may frighten a child. The children may dream about them or lie awake in fear. Such stories also make them afraid in the dark.

Then there are pictures. Good pictures and picture books are very necessary for children. One or two pictures that are worth while are better than many poor ones. Since babyhood my little girl has known and loved pictures. She learned nearly all of the animals in that way. She has also learned how to handle a valuable book and now she can be trusted to go to the bookcase and take out and replace a book after looking at the pictures, and asking about them. Good pictures are an education to all children and they love them.

In kindergarten children play with blocks, among other things, at first with the simplest kind, then with more complicated and larger sets. They are directed and taught how and what to build, and it trains the eyes and hands, teaching accuracy and construction. At home most children have blocks and can build on the floor and love to build for hours. My husband builds castles and all kinds of wonderful houses with our little girl, and in this way the building becomes more and more instructive and worth while.

Crayons have played a large part in our daughter's life. She loves to draw and can really draw well. I have drawn simple things for her and she tries to copy them. She also tries to draw what she sees, and thus in these two ways she is acquiring another medium of self-expression.

Article XLI.

SIMPLE THINGS PLEASE CHILDREN, AND SIMPLE METHODS ARE BEST TO CONTROL THEM.

By Mrs. Isabel S. Wallace.

How many things can be made by folding ordinary wrapping paper. Soldier caps for small boys keep them amused a long time. A house and furniture with a few cut-out dollies make such busy little girls. After all, it is the simplest things that make children happiest.

When at my mother's home one time my little girl folded and cut a house, windows, doors, and all. Her grandmother was delighted and the little one said, "We'll keep it to show grandpa and I guess he'll say I am a smart Tottie." With a little thought mothers can learn how to fold and teach their children to fold a number of things. It is excellent practice in accuracy and neatness, besides affording the joy of making something.

In a regular kindergarten all the sets of blocks, which are of different sizes, are kept in boxes with covers, and each child puts his away carefully and correctly or else the cover will not fit. Then all the sets are collected and packed in a closet by a few of the children. Children love to help keep things in order and enjoy doing it.

At home, also, a child should have a place for his toys. A playroom is ideal, but if this can not be provided, some place surely can be found, even in a small flat, which a child may have for his very own to keep his toys in. From the age of 16 months I insisted that my little girl put her toys away neatly. We began it as play, and now it is a habit. Of course, sometimes she is in very much of a hurry to do something else, but the toys are put away in the end. We made her a large dry goods box, standing up on end. My husband put cheap castors on it and two shelves across it. There all the small toys are kept. The blocks have their own boxes; the small things have baskets; and crayons, pictures, and papers go into a box with a cover. All of them fit into the shelves; also the animals, dolls' trunks, washtubs, and many other such things. The picture books have a compartment in the large bookcase. "A place for everything and everything in its place," when little folks have finished playing, makes a good rule.

One day when my child was not at home, a little girl came in for a visit. I took her into the playroom and left her there very happy. After a short time she went home. When I returned to the playroom I found everything so scattered over the floor that there was hardly room to walk. The next time the little girl came I had a talk with her. I have made it a rule, and it is a hard rule to keep, for some mothers are offended, that if a child will not help put away the toys carefully when he is ready to go home, then he can not come back to play with that toy again until he is ready to do what I ask. My little girl was playing at a neighbor's a few days later. When it was time to come home I went for her. The children were cutting out pictures and had made a dreadful mess on the table, chairs, and floor. I told my little girl to help pick them up before putting on her things. The mother said, "Oh, that's all right; Sadie never picks up scraps; I do that. So don't make your little girl do it." And my child smiled and calmly said, "It's all right, mother, I don't have to pick up here." Then I told the mother about my rule and explained that it wasn't mere crankiness on my part, but a desire to form good habits in the children and to develop character.

All children are naughty at times and it is so hard to know how to deal justly with them. One day when I was very busy my little girl came in from playing in the garden. I suppose she was tired and hungry, but she did not herself know what was the matter. She began to try a new kind of naughtiness, lying down on the floor, kicking and screaming and saying naughty things to me. I was amazed and quite puzzled as to how to treat such a proceeding. At first I ignored her, but she kept it up. I asked a few questions in a kindly way, but that seemed to fan the flame. I was busy, in a hurry, warm, and tired and began to get very angry. Nevertheless I realized that if I could not control my temper I could not expect a 5-year-old child to do so. So I pondered over what to do. Finally I went and picked her up and carried her to a chair where we both sat, or flopped down, as it was no easy task carrying a kicking, crying mass of humanity. I never said a word, but rocked her quietly. After a little while she stopped, and I began to sing softly. She almost went to sleep. Then I knew she was simply overtired and I was so thankful that I had not indulged my own temper in any way. After a short time we had lunch and then she went to bed for her afternoon nap. She slept hours, repairing the wasted energy and her nerves in blessed sleep. She has never tried that trick again.

I find a word of praise goes so much further than blame, and the bright eyes give back such a grateful look.

Last autumn my little girl began to go to kindergarten. She loves the work and is always so proud to show what she has made. I was very anxious for her to go, as she was shy and needed to learn "team work" and to rub up against other children in order to polish off the corners.

The kindergarten is the link between home and school. There is more freedom, more spirit of comradeship, more play than in the classroom, and to me it seems like administering a rude shock to usher a child into definite studies fresh from the home. By attending kindergarten the child becomes familiar with a school building, school hours, and necessary rules; he develops courtesy and kindness toward others, and enjoys listening at story time. He also likes working and playing in unison with others, and he learns to control fingers and in fact to control the whole body. No school is complete without a kindergarten.

Article XLII.

GARDENS, PETS, BOOKS, AND PICTURES FOR COUNTRY CHILDREN.

By Mrs. Eda W. Semken.

I have thought a great deal about what I might say if I could talk with mothers who live far away from any center of population, and this fact stands out most clearly in my mind: The remarkable opportunities a mother in the country has to teach her children at first hand what the seasons bring.

Let them have a garden of their own, in which to grow very simple flowers and vegetables that are hardy and easily grown. Let them have pets to take care of. This will teach kindness and service for those dependent upon them.

Every child should have daily duties, and if you begin early and make play of these tasks, most children will love to do them, and feel the importance of being a real help in the home. It seems to me that the three largest factors all through life are self-control, independence, and obedience, and we can not begin too early in any child's life to teach these virtues.

Another thing the far-away mother may obtain for her child is books. Develop early a fondness for books in your children, and a great battle is won. All children love fairy tales, Nature stories and poetry such as Grimm's and Andersen's Fairy Tales. Wise selections of the best of these " time-tested stories " are now published by many publishing houses. Some of the Grimm stories are too grewsome to tell to children. Kipling's "Just So Stories," and poems by Robert Louis Stevenson, Eugene Field, James Whitcomb Riley, and Jessie Wilcox Smith are all excellent for children to know.

Six years of age is not too early to begin to build a library for a child, and the books should be in his own room, where they can be easily reached and become constant companions. The books my daughter enjoyed most at the age of 7 were:

In Story Land—*Elizabeth Harrison.*
Kindergarten Story Book—*Jane Hoxie.*
Pinnocchio—*C. Collodi.*

Tale of Peter Rabbit—*Beatrix Potter.*
Tale of Tom Kitten—*Beatrix Potter.*
Seem-So's—*L. J. Bridgman.*
Story of Noah's Ark—*E. B. Smith.*
Pied Piper of Hamelin—*Robert Browning.*
Little Lame Prince—*Dinah M. Mulock.*
Among the Farm-Yard People—*Clara D. Pierson.*
Among the Night People—*Clara D. Pierson.*
Among the Meadow People—*Clara D. Pierson.*
Among the Pond People—*Clara D. Pierson.*
Among the Forest People—*Clara D. Pierson.*
Poems of Stevenson.
Poems of Field.
Poems of Riley.
Poems of Jessie Wilcox Smith.
The Hollow Tree and Deep Woods Book—*Albert Biglow Paine.*
The Hollow Tree Snowed In Book—*Albert Biglow Paine.*
The Book of Clever Beasts—*M. Reed.*

Two other subjects loom up in my mind for the far-away mother, and they are music and pictures.

The phonograph as an educational factor has tremendous value. Through this means the children can become familiar with all that is best in music, either vocal or instrumental. They can learn not only the music but about the composers, and the great men and women who sing and play various instruments.

A child's taste in pictures can be cultivated by having in his room pictures which are good both as to color and subject. Pictures dealing with Nature in any form are always attractive to a child and if they are hung in the room so that the child can easily study them and even handle them if he wants to, this adds much to his enjoyment.

There are many book and picture firms that are only too glad to send catalogues upon request. The far-away mother can obtain anything of this kind she may want by mail; and if, besides a garden and pets, a child can have books, music, and pictures, it seems there is real education of the right kind going on.

Article XLIII.

DEVELOP RIGHT RELATIONSHIPS FROM THE START.

By Mrs. Ruth Heppner Swaine.

All kindergartens have one characteristic in common—the respect which the children show for the individual rights of others. Where many little children are gathered together, there must be governing laws and obedience to these laws.

In the ideal kindergarten these laws are more feelings than facts. The children grow to respect and obey them spontaneously, almost unconsciously. Thus, even when they are 4 and 5 years old, they can be led to a right relation toward their fellow beings. Could anything be more important?

All children do not live near a kindergarten, but all children have playmates. A wise mother will quickly establish the law of right relationships among the children who play in her home. Even a busy mother—and are not all real mothers very busy?—can with a word now and then impart a feeling for the rights of others, and this, once gained, is never lost through life.

The kindergarten is the most democratic of institutions. The children feel no class distinctions—in fact, there are none in the world of the 3-year-old. My Philip plays as joyfully with the little fellow in the servant quarters next door as he does with the son of my best friend. The public-school kindergarten is particularly interesting, because all classes mix freely and are entirely free from self-consciousness. Each little individual contributes his personal traits toward the making of the whole. A fault may serve as great a purpose as a virtue, and both may serve as mirrors wherein the child sees himself. Under the guidance of the kindergartner he will see wisely.

Moreover, the children soon learn to love the calm of the kindergarten room, and come readily under the influence of the ruling spirit—the denial of self for the good of the whole.

In your own garden, the back yard, there can not be the close supervision that there is in the kindergarten, and elimination sometimes becomes a necessity. If you are fortunate enough to live among your own kind, where all the children in your neighborhood are reared similarly, you will probably not have any serious problem. But if you live in a cosmopolitan neighborhood and there is an older child with avowedly wrong tendencies, the safest step is to encourage him to seek his older playmates. I would deny him my babies of 3 to 6. If the child comes to your gate who has had less of a chance than your own little ones, it is surely a privilege to take him in, for he will soon begin to thrive under the new influences. If you have much spare time, take in as many children as you can. Supervise them closely, and rather than let willful weeds grow among your flowers, eliminate.

Be one of the playmates yourself as often as possible. Join the little group in the yard for a few glorious minutes, and you will come back to your housework completely rested. A whistle from mother for a moving train is such a surprise, or an unexpected laugh over the tumbling blocks makes it only a joke where it might have been a tragedy.

The child feels your interest ever in back of him then, and it is very human to desire the interest of those we love. Toss the ball around the circle, push the swing, make believe partake of the sand cakes, and observe the new values the old plays take on.

Draw the children of the neighborhood to your own garden if you wish to experience a delightful sense of peace and love. No flowers you might coax to grow there are half so worth while. With your guidance and their daily association, they will learn many lovely things, and carry them through life. Friendship, care for the weaker ones, unselfishness, joy in the joy of others, and a feeling for the right are the beautiful things of life that may be cultivated and that will be a joy forever.

Article XLIV.

BE KIND, BUT FIRM, IN YOUR INSISTENCE ON THE RIGHT.

By Mrs. Ruth Heppner Swaine.

The child is a primitive little being. His desires are near the surface, and primarily very selfish. He wants all things for his own. He must also be first in everything, and, if he is the biggest force in the play group, what more natural than that he should try to make everything conform to his wishes? But this child, if once actuated by the right, becomes the most generous, the most considerate, and the gentlest of little fellows. A few words, a firm but kind insistence on your part, and he knows the pleasure of giving up for others.

All children have their difficulties with one another, and sometimes, if one judges by the noise in the back yard, they are very big ones.

A moment's wait will usually show whether it is wise to run and help the children readjust their little world. Do this only when necessary. Hold your breath behind the door, and see if happily they are not righting the situation themselves. Even the physical hurts need much less sympathy than the average mother is apt to bestow. Would we coddle our children into becoming physical cowards? From earliest babyhood begin to turn their attention when hurt to some new interest, and observe how quickly the pain is forgotten.

A strong conviction has grown out of the passing years of my motherhood that the greatest service a mother can do her child is to teach him self-reliance. If you begin with the baby, the habit forms easily and before you know it self-reliance has really become a habit with him. Hold yourself free from fear as he tries out his growing powers. Watch alertly, but wait. Let him try the reach that may topple him over, but secures for him the bright ball. Let him make all the moves he wants to, and if necessary, be there to catch him as he falls. Hestitate long before you turn a child deliberately away from the thing he has set his heart on doing. Strong initiative is too glorious a characteristic to nip in the bud. Try for one day to stop and think before you deprive your child of the pleasure of simple achievement.

There are countless little tasks a child can do for himself to help mother. Each mother will think of many of these in the course of a day. Remember that in the child's world of new impressions the most trite acts to us are to him the most delightful of plays.

Play is the vital employment of childhood. The art of playing alone, being friends with himself, is a foundation for self-reliance in greater things later in life. A child can not be more than contented. So hesitate, dear mother, to interfere when your child is quietly employing himself in his own chosen way, even if it is only baby with his toes. Let the spell last as long as it will; the next will last longer. Soon your child of 3 will play hours by himself. The busy mother often needs this respite.

Article XLV.

LEARNING TO PLAY WITH OTHERS IS THE FIRST LESSON IN SOCIAL TRAINING.

By Mrs. Dora Ladd Keyes.

I like to remember that Froebel said, "The nursery was my university." This statement gives every mother a bond of understanding and sympathy with Froebel and his ideals as they have been worked out in the kindergarten.

The best modern kindergartens center their programs largely around the natural home activities of the child. Hence even though mothers may find it impossible to secure kindergarten privileges for their children, materials and oportunities are close at hand with which to provide, to some degree at least, for this need.

Last February a laddie who was just "half past 3," with hands well scrubbed and nails manicured, cut out 38 valentine heart cookies for his mother. Before he had finished he learned to be neat, quick, firm of touch, and economical in his spacing. In addition he was unconsciously gaining a sense of participation and cooperation and the feeling of being a "real help" to mother.

Last autumn the same little laddie gathered a large pailful of scarlet summer seeds, which we plant every spring around the play fence.

Children love to have a place that is their "very own." My husband and I feel that the $8 we invested in a fence for a play yard for our two boys were well spent. The play yard is 15 feet square and contains a little cherry tree, some grass, and a large space from which grass has long since disappeared. Here we put a big sand pile, which, when wet, supplies dough for all sorts of delectable bakery products, and when dry affords opportunities for constructing bridges and mysterious tunnels.

The play yard is the place for tea parties in the "hungry middle of the afternoon." It has not only supplied the needs of our own children, but is quite the social center of the neighborhood—too much so, one mother sometimes thinks.

Songs, stories, handwork, and nature study are important lines of kindergarten activity which a mother can pursue at home with the help of a few good books and her own resourcefulness. The child deprived of kindergarten is not so likely to suffer for want of these activities as for the lack of the social training which, to me, is the biggest contribution of the kindergarten. The child needs to play with other children. "Here," says Jean Paul, "the first social fetters are woven of flowers." And therein lies the unique value of the little play yard. Children learn there to give and take, to adjust themselves to each other, and cooperate. They also develop the initiative that makes for leadership.

Play in the playyard is undirected so long as harmony prevails.

The neighborhood is the next larger natural group after the family and prepares the child for a conception of the larger school group and the community. In the summer I invite the children of the neighborhood—about 16 in all—to come to our big lawn twice a week and join in our "twilight play circle." During the winter I also invite them to come once a week to play indoors. We call the winter meeting our "neighborhood fun club." I took my neighborhood as I found it and the children vary from 3-year-olds to two eighth-grade girls. One of the latter plays the piano for us and the other helps in numberless ways. I serve no refreshments.

Last winter we learned three simple folk dances and a number of the beautiful games that are so deeply rooted in the early social experiences of the race, such as "London Bridge" and "Here we go 'round the mulberry bush."

We also played other games suitable for a large number of children indoors, and learned about 30 riddles. Children who could read prepared special contributions, such as child poems of Eugene Field and Robert Louis Stevenson. Two little girls sang duets for us, and one day we had a little guest who taught us some charming solo dances based on Mother Goose rhymes.

The children's love of the dramatic was shown by their fondness for guessing pantomimes. A child usually planned a pantomime beforehand and then invited others to help him work it out for the rest to guess. Our pantomime material was drawn largely from Mother Goose, Æsop's Fables, and well-known fairy tales.

Our "fun club" takes some of my precious spare time, as well as a considerable amount of energy, but I feel that it pays for myself as well as for the children. It makes me realize what Froebel's friend meant when he said, "It is like a fresh bath for the human soul when we dare to be children again with children."

Article XLVI.

KINDERGARTEN METHODS AS VALUABLE FOR HOME AS FOR SCHOOL.

By Mrs. Marie K. Chaffee.

About a year and a half ago a number of mothers in a small town petitioned their school board for a public kindergarten. They knew that there were at least 25 children in the community who would attend and that there was a vacant room in one schoolhouse which could be used for the purpose. But the school board contended that there were too many other expenses for the coming year and that the town could not afford to establish a kindergarten.

The mothers, however, persisted in their idea that the need for a kindergarten was very great, and after many months of patient work they succeeded in persuading the school committee to give the use of the vacant room. A class of eight children has now been started, and it is in charge of a young pupil kindergartner who is taking this work as her senior practice teaching, charging only a small sum for each child. She is full of enthusiasm and the work has been progressing steadily under her inspiring direction.

The children who attend the kindergarten are nearly all from good families. It impressed me strongly, as I canvassed the town in search of pupils, that the very parents who could and did give their children every possible advantage were the ones who were quick to realize the opportunities in kindergarten training. Other parents, whose children were "running wild" physically and mentally, so to speak, would say, "We don't think our child needs to go to a kindergarten," or "We can not afford to pay so much for just having Mary amused."

All mothers should know that the kindergarten is not a place where a child is "just amused," nor is it a schoolroom where facts are drilled into a child's head for hours at a time. A well-managed kindergarten is like a well-managed home—a place where the children may develop naturally and normally. In the kindergarten they do this to the very best advantage under the careful guidance of a teacher trained for her work and in the companionship of other children.

After a kindergarten has been started, mothers should visit it frequently and attend the mothers' meetings which the kindergarten conducts in order to explain to them the purpose of the kindergarten and how they may help its work and influence. In this way they will come to understand the value of the games and other activities of the kindergarten, and will gain many helpful ideas and suggestions, which may be used equally as well in the home as in the kindergarten.

And right here should be pointed out the opportunity the kindergarten mother or the mother who knows something of kindergarten methods has in her community. She can start the right spirit among the mothers and children all about her if she so desires. She can form mothers' clubs and have a kindergarten training teacher or supervisor give talks. The spirit of kindergarten games can be carried into the whole community, gathering in the fathers and mothers, and thus greatly helping the child-welfare movement.

I know a mother who never had any kindergarten training, but became interested in it when her babies were small. She read all the books she could find on the subject and visited many kindergartens in order to understand more of the value of play as Froebel explains it. Then the mother began to apply Froebel's method systematically in the home education of her children. One of her daughters when she grew up became a student of mathematics and the mother always says that the first lesson in mathematics began when her daughter was a little girl and wore curls. As the mother brushed the curls each morning the child would count, and add and subtract them, and thus an instructive as well as a merry game was made out of what is usually a tedious performance.

This mother has brought up four children, but even though the boys and girls are all grown, this family has never lost its play spirit. How far we stray from the path of youthfulness and joy in starving the play side of our makeup. A man is old only when he has lost the love of play. It is not merely, " Come, let us live with our children," but " Come, let us play with our children."

Article XLVII.

STORY TELLING FOR PATRIOTISM.

By Carolyn Sherwin Bailey.

PATRIOTISM THROUGH CONSERVATION.

One of the greatest of the good impulses born of the present struggle is the ideal of thrift and conservation that it is bringing to the children of American homes. Without feeling the pinch of actual want, they are learning the useful game of making the best and the most of things. New values are being discovered, economy is no longer looked down upon, but is raised to the level of an art, and simple living is going to make healthier bodies and stronger minds for the children who will be the citizens of to-morrow's freedom.

Help the children, through a story, to work out a plan of conservation that will fit their own lives. What, on his own plane can a little child do without, share, or put to a wider use in our crisis of to-day? The story of "The Birthday Cake" suggests food economy, and after the children have heard it they may make their own application of the lesson in other home sacrifice.

WHAT HAPPENED TO THE BIRTHDAY CAKE.

"It will need four eggs and a cup of sugar and some milk and some flour," mother said, as she went to the pantry to get the yellow mixing bowl and the sifter to make Barbara's birthday cake.

"It needs sugar, too, for the frosting, and please make very thick frosting, mother dear," Barbara begged. She was standing beside the kitchen table, watching, for she was going to be 6 years old in just a few days. It was to be her birthday cake, rich and sweet, and shining on the supper table with six pink, lighted candles.

"I am afraid that the cake and the frosting together will use up all our sugar," mother said as she came back. "I wonder," she went on, with just a little bit of worry in her voice, "if we could manage with two eggs instead of four. Eggs cost so much now."

"Well, we have to make a birthday cake, don't we mother, because I always cut it and share it?" Barbara said. Mother looked down in Barbara's kind face and she thought a moment, too. That was the wonderful part about mother and Barbara, they so often thought the same things. Then they said something to each other, laughed, and hugged each other, and mother put away the big yellow mixing bowl and flour sifter.

The next day was Barbara's birthday and two people who didn't have birthdays had surprises.

Timothy, whose mother did the washing, had been very ill for a long time. He was getting better, and could sit in the big rocking chair, all wrapped up in a quilt, and try to smile out through the window when Barbara passed. Barbara stopped at Timothy's door on the morning of her birthday. She had a basket on her arm. She took from it a bottle of creamy milk and a bag that held four white eggs.

"Here is a part of my birthday cake for you, Timothy," Barbara said. "It will make you get well faster."

Granny Blake was just putting her tea kettle on her stove when she heard a knock at the door of her little house. When she opened it she saw Barbara, who loved Granny Blake so much. No one could make such nice rag dolls as Granny, and she was always cheerful and smiling, even when she had hardly enough coals to make her kettle boil.

Barbara still carried her basket, and she took a package of sugar and a freshly baked loaf of wheat bread out of it.

"Here is a part of my birthday cake for you, dear Granny," Barbara said. "This is sugar for your tea, and mother made the flour into a loaf of bread for you to eat with it."

Then Barbara went home almost as happy as if she had eaten a large piece of frosted birthday cake. But when the day was almost over and it grew dark, Barbara began to wish that she could see the six pink lighted candles shining for her birthday. She went slowly in to supper, thinking of them. And, oh, what a surprise she found there!

In a rosy circle in the middle of the table shone six pink, lighted candles set in six pink rosebud holders. In the center of this birthday circle of lights was a bowl that held six beautiful pink roses from the garden and beside Barbara's plate was a parcel wrapped in pink tissue paper. When Barbara blew out the candles and opened the parcel she found a pink hair ribbon for a birthday present.

"What a beautiful birthday this has been, mother," Barbara said, "without a birthday cake."

PATRIOTISM THROUGH HOME SERVICE.

Every story, worth while or otherwise, that the little child hears becomes a part of his life. Its characters are alive for him, he puts its incidents into action in his daily work and play and he remembers the story's teachings long after the story-teller has forgotten it. There is a new hunger that we ought to satisfy in childhood, this story hunger. Especially do we need to utilize the child's imagination just now as a means of developing those civic virtues and the love of country that will make the children of to-day good American citizens of to-morrow.

Child patriotism is begun in service and especially in home service, for the home is the republic of childhood. If the mother and kindergartner connect home service and simple community service with a love for and reverence for the flag, the first impressions of patriotism will be inculcated in children.

The story of "The Flag Bearer" has this starting point in patriotic teaching for its lesson.

THE FLAG BEARER.

The primary class had a very beautiful American flag and some child was going to carry it from the schoolroom across the park and into the town hall on the holiday. All the primary children would march after the flag and they were going to sing "America" and "The Star Spangled Banner." It would be a wonderful day and each child wanted to carry the flag.

No one was sure who would be chosen as flag bearer, but their teacher had said the week before, "It will be the child who loves his country the most who will carry the Stars and Stripes. Try and do something for your country during the week."

So the children had been very busy ever since doing all sorts of things that would show how they loved their country.

Marjory had been knitting for the soldiers. Her grandmother had given her a pair of pretty yellow needles and a ball of soft gray yarn and had started a scarf. But the stitches would drop and there was still enough snow for sliding on the hill back of Marjory's house. Her knitting was not much farther along on Saturday than on Monday.

"I will show how much I love my country," Hubert said, and he asked his mother to sew the gilt buttons from his great-grandfather's soldier coat that hung in the attic on his reefer. Then he showed the bright buttons to all the other children and they thought that Hubert looked very fine indeed.

"I shall wear them when I carry the flag next week," Hubert told them.

But the children thought that, perhaps, Roger would be chosen as flag bearer because he bought such a large flag with the money in his bank and put it up on the flagpole in his front yard. Roger's father helped him raise the flag on a rope so that he could pull it down at night, but once the Stars and Stripes were flying Roger forgot all about them. His flag stayed out in the wind and sleet and its bright colors faded and the stripes were torn.

After all, the children decided, it would be Edward who would carry the flag. Edward had a dog named Trusty and he decided to train him to be a Red Cross dog. He put a white band with a red cross on it around Trusty and harnessed him to a little express wagon to carry bundles. Trusty had never worn a harness in his life, or been fastened to anything. He tried to get away from the wagon, but Edward strapped the harness more tightly. The straps hurt Trusty and it hurt his feelings to be made to drag the cart, but Edward drove him to and from the drug store and the grocery and the butcher's, carrying the parcels that Edward had always brought alone before.

The other children, too, all tried to do unusual things to win themselves the place of flag bearer. They played their drums in the street and made soldier caps and wooden swords and drilled. The little girls dressed up and played army nurse with their dolls. The boys bought toy soldiers and horns at the toy shop. There was a great deal of noise everywhere.

Then it was the holiday, and everyone was greatly excited over what was going to happen. Whoever had a red ribbon, or a blue necktie, or a red, white, and blue badge felt very proud indeed to wear it. Every child sat as still as a mouse as the teacher spoke to them.

"Marjory showed me five rows that she had knitted for a soldier when I went to her house a few days ago," she said. "I wonder how many rows she has finished now?"

"Only five," Marjory said softly.

Hubert touched the buttons on his reefer and sat up very straight in his place.

"I am wearing my great-grandfather's soldier buttons," he said.

"That ought to make you feel as brave as he was, when he earned the right to wear them in battle," the teacher said, and Hubert suddenly thought that gilt buttons had not made him into a soldier at all. The other children began to think, too, as they looked up at the Stars and Stripes waiting at the end of the room. Edward remembered how the harness had hurt Trusty and the boy with the drum remembered how he had awakened the baby from her nap. Roger thought of his torn flag, flapping in the wind on the top of the flagpole. No one said anything until the teacher looked at the end of the class and smiled, and said:

"Well, Peter."

Peter smiled back and tried to cover up the holes in his jacket sleeves and tucked his old shoes under the seat. Peter's father had gone to be a soldier and there were his mother and the two babies and his grandfather, who was blind, at home.

"What have you been doing all the week, Peter?" the teacher asked.

"Tending the babies so that mother could go to the factory and sew the soldiers' uniforms," Peter said. "And leading grandfather out for a walk when it was a sunny day."

"Peter's got a little flag hanging out of the window," one of the children said, "and he's so careful of it. He takes it in every night and puts it out again in the morning."

"He saluted the flag and took off his hat to it when the parade went by the other day," said another child. Everyone loved merry, ragged Peter, who could play so gaily when he had time for a game.

Just then they heard the band outside. It was playing "The Red, White, and Blue," the music to which the children were to march with the flag.

"Who shall be our flag bearer?" the teacher asked.

The children knew now. They were quite sure.

"Peter!" they said.

So Peter carried the Stars and Stripes across the park and into the town hall, with all the primary children marching like soldiers behind. The wind blew it around him like a cloak to cover up the holes in his jacket sleeves and his old shoes. Wherever he looked he could see the colors; the sky was as blue as the field in the flag, a few snow stars lay on the ground and the first robin redbreast sang on a branch over his head. And the children following Peter knew what the colors told them to do for their country—to be brave and good and true at home.

PATRIOTISM THROUGH PLAY.

Every child loves the toys that have to do with soldiering, loves to watch a parade, and has an ideal of soldierhood in his heart as a form of patriotic service to be emulated and practiced. These instinctive interests of childhood are guideposts for us in education. Find out what your child likes to play and likes to play with and then see how the interest can be used for the child's best development.

The toy sword should be a symbol of defense of the right and of protection of the weak rather than just a plaything that stimulates rough amusement. So, also, may the toy soldier, like the soldier of this story, represent for little children those qualities that combine in the true soldier for patriotic service.

THE TRAVELS OF THE LITTLE TOY SOLDIER.

He was the largest and the best dressed and the bravest looking of all the toy soldiers in the toy shop. Some of the toy soldiers were made of paper and these tore easily if they even tried to drill. Some of the toy soldiers were made of tin and these bent if they had an encounter. But this toy soldier, who stood head and shoulders above the others, was made of wood. He had once been a part of a great pine tree that stood in the forest, and his heart was as brave and true as the heart of the tree.

His trousers were painted green, with yellow stripes, and his jacket was painted red, with gold buttons. He wore a painted blue cap upon the side of his head, with a band that went under his chin, and he carried a wooden gun in one arm. He could stand alone, for his wooden legs were glued to a block of wood, and his eyes were black and shining and his mouth was painted in a smile.

When the toy soldiers went from the toy shop to live in Gregory's house the little boy thought that he had never seen such a fine soldier in his life. He made him captain of all the soldier ninepins and guard of the toy train, and he took him to bed with him at night. Then, one day, James, who lived next door and was Gregory's neighbor, came over to play with Gregory.

"What a nice toy soldier," James said.

"Yes, he's mine," Gregory said.

"May I play with him?" James asked.

"No; I said he was my toy soldier," Gregory answered.

"Then I'll take him," James said.

"I won't let you," Gregory said.

Then the two little boys began pulling the toy soldier to see which could get him away from the other, and the toy soldier did not like it at all. He was fond of a good battle, but not of a quarrel. He decided that he would not stay in a house where there was a quarrelsome boy and so he tumbled out of a window that was close by and fell, down, down to the street below.

The toy soldier had not lain long on the sidewalk when Harold passed by and picked him up.

"I wanted a toy soldier and here is the finest one I ever saw," Harold said, and he slipped the soldier inside his coat and started on, for he was going to school. The toy soldier lay close to Harold's watch that was tick, tick, ticking the time away, but Harold loitered and at last he stopped to play a game of marbles with another little boy whom he met. "I don't care if I am late for school," he said.

"Oho!" thought the Toy Soldier, and as the two little boys played he dropped out from under Harold's coat and into the gutter. When Harold reach school, late, the Toy Soldier was gone.

Joe found the Toy Soldier in the gutter and ran home with him to his mother.

"I have a Toy Soldier!" he said.

"How brave he looks," said Joe's mother.

All the rest of the day the Toy Soldier went about with Joe and listened to what he said and watched what he did.

"I can't go to the grocer's; I'm afraid of his dog."

"I can't put in that nail. I am afraid that the hammer will slip and hit my finger." This was what the Toy Soldier heard. Then it was Joe's bedtime and the Toy Soldier went upstairs with him to bed, but Joe cried all the way.

"I'm afraid of the dark," he said.

When Joe was asleep the Toy Soldier slipped out of his hand and fell into a scrap basket. He knew very well that he couldn't stay with a child who was a coward.

No one saw the Toy Soldier when the basket was emptied in the morning. He went with the scraps into a huge bag and then into a wagon, and then into a factory where men sorted the cloth to make it into paper. One of these men found the Toy Soldier and took him home to his little boy, who was lame and had to stay alone all day.

"Has it been a good day, John?" his father asked.

"Oh, yes!" laughed John as he hugged the Toy Soldier.

"You have my supper ready just in time," his father said, watching the soup bubbling in a shining pot on the stove.

"And I cleaned a little and set the table," John said.

"Has your back hurt you very much to-day?" asked his father.

"A little, but I dont' mind that," John said. "See how fine the Toy Soldier looks standing on the table!"

"Oho!" thought the Toy Soldier, "now I have found a place where I can stay. Here is another soldier, cheerful and willing to work and brave!"

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 40

WORK OF THE BUREAU OF EDUCATION FOR THE NATIVES OF ALASKA, 1917-18

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
15 CENTS PER COPY

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REPORT OF THE WORK OF THE BUREAU OF EDUCATION FOR THE NATIVES OF ALASKA, 1917-18.

PART I.. GENERAL SUMMARY.

During the year the field force of the Bureau of Education in Alaska consisted of 5 superintendents, 1 assistant superintendent, 116 teachers, 9 physicians, and 11 nurses. Sixty-nine schools were maintained, with an enrollment of 3,635.

School buildings were erected at White Mountain, whither the Eskimos had migrated from Council; at Elim, within a tract on Norton Sound which had been reserved by Executive order for the use of the Eskimos formerly inhabiting the village of Golovin; at Fort Yukon, to replace the school building which the erosion of the river bank had rendered unsafe; and at Tyonek, where the small log building hitherto used for school purposes had proved to be inadequate; at Metlakatla a residence was erected for occupancy by the principal teacher.

The wisdom of the policy of setting aside selected tracts within which the natives can readily obtain fish and game and advantageously conduct their own enterprises has again been demonstrated by the success of the colony at Noorvik, in Arctic Alaska. With their advancement in civilization, the Eskimos living at Deering, on the bleak sea coast, craved a new home. Lack of timber compelled them to live in the semiunderground hovels of their ancestors, while the killing off of the game animals made it increasingly difficult for them to obtain food. An uninhabited tract on the bank of the Kobuk River, 15 miles square, abounding in game, fish, and timber, was reserved by Executive order for these Eskimos, and thither they migrated with their household goods and herds of reindeer. On this tract, in the Arctic wilderness, the colonists under the leadership of the teachers, within two years have built a village with well laid-out streets, neat single-family houses, gardens, a mercantile company, a sawmill, an electric light plant, and a wireless telegraph station, which keeps them in touch with the outside world.

Affairs at Metlakatla, on Annette Island, have made satisfactory progress. The legality of the Annette Island Fishery Reserve has been established by the opinion of the Supreme Court of the United States, December 9, 1918, and plans for the development of the colony can now confidently be carried into effect. By a lease dated

April 30, 1917, the Secretary of the Interior, on behalf of the Metlakatlans, granted to the Annette Island Packing Co., of Seattle, fish-trapping privileges within the reserved waters adjacent to Annette Island and permission to erect and operate a cannery on Annette Island. For these privileges the lessee guaranteed the payment of not less than $4,000 during the season of 1917 and of not less than $6,000 per annum for five years beginning with 1918. It is expected that the revenues accruing from this lease will enable the Secretary of the Interior to take over, for the Metlakatlans, the property of the lessee within the reserve and to arrange for the operation of the cannery by the natives themselves.

The Annette Island Packing Co. expended during 1917 and 1918, including interest, $32,766.44 in the construction of cannery buildings; the royalties of those seasons amounted, with interest, to $17,330.71, leaving a balance of $15,435.73 to the credit of the company, December 31, 1918. The company packed 65,806 cases of salmon during the season of 1918.

In May, 1916, the representatives of the Bureau of Education succeeded in organizing among the natives the Metlakatla Commercial Co., with a capital of $2,295 and 30 shareholders, to conduct the mercantile business of the settlement. The auditing of the affairs of the company in January, 1919, showed a capital of $21,140 at that date and a net profit of $13,721. The number of stockholders had increased to 156. In addition, the company had rehabilitated and operated the sawmill and had furnished lumber for the cannery building and for other buildings in the village.

The returns to the natives of Metlakatla from the Annette Island Packing Co., for the season of 1918, amounted to $70,252.55, distributed as follows:

Erection of cannery buildings:		
Labor	$2,755.56	
Piling	619.81	
To Metlakatla Commercial Co.—		
For lumber	9,031.62	
For miscellaneous	49.00	
		$12,455.99
Operation of cannery:		
Fish royalties	$11,966.69	
Labor	1,869.19	
Trap fees	500.00	
Purse seiners (196,012 fish)	12,023.25	
To Metlakatla Commercial Co.—		
For labor contract	29,909.08	
For miscellaneous	1,528.35	
		57,796.56
Total		70,252.55

The income and wages resulting from the cannery lease, guaranteed through five successive years, and the prosperity of its commercial company assure the economic restoration of the Metlakatla colony.

Economic conditions among the natives of Alaska have been greatly affected by the war. The cost of food, clothing, and manufactured articles imported from the States has increased as much as 300 per cent. The Bureau of Education has, therefore, through the agency of its teachers, urged the natives to live, as much as possible, independently of imported articles and to depend upon native products, not only for their own benefit, but also for the assistance they can thereby render to the country in conserving its food supply. New impetus has been given to the endeavor of the Bureau of Education to train the natives in the raising of vegetables for their own use and for sale. Efforts in this direction have produced encouraging results, especially in the upper Yukon, Kuskokwim, and Kotzebue Sound regions.

In widely separated parts of Alaska the natives showed their gratitude to the Government, which has done so much for them, by zealously cooperating in activities which helped to win the war; they willingly complied with the requests of the Territorial food administrator, liberally purchased Liberty bonds and War Savings Stamps, organized branches of the Red Cross, formed knitting and sewing societies in many villages, and contributed toward the support of the "Alaska bed" in one of the American hospitals in France.

Congress appropriated $62,500 for the support of the medical work of the bureau among the natives of Alaska during the fiscal year 1917–18. Nine physicians and 11 nurses were employed; hospitals were in operation at Juneau, Nulato, Akiak, and Kanakanak; as heretofore, medical supplies were sent to teachers remote from a hospital, physician, or nurse, for use in relieving minor ailments.

During the year the building at Kanakanak, erected as a school building in 1909, was enlarged and remodeled for hospital purposes; the hospital building at Akiak, begun in 1917, was completed.

At the Juneau hospital the policy was inaugurated of receiving native girls for theoretical and practical training as nurses. This action will result in the training of a considerable number of girls who will render effective service in improving the health and in raising the standard of living in the native villages to which they return.

As the natives of Alaska advance in wealth and independence it is natural that they should wish to assume part of the expense of their medical service. The honor of taking the first step in this direction belongs to the natives of Hoonah, who, during the latter part of the year, paid the salary of a physician and started a fund for the erection of a hospital in their village.

Pending the time when the congressional appropriations will permit the bureau to assume the entire expense of the medical care of the natives in southeast Alaska, the Commissioner of Education entered into an agreement with the woman's board of home missions of the Presbyterian Church by which the board assumed the entire responsibility for the medical work in the villages of Klawock and Hydaburg and agreed to rent to the bureau its hospital building at Haines for use as a tuberculosis sanitarium, the board also assisting in the maintenance of the sanitarium during the first year.

There were in Alaska June 30, 1918, approximately 120,000 reindeer. The reports from the reindeer stations for the fiscal year ended June 30, 1917, the latest complete information received, show a total of 98,582 reindeer, distributed among 98 herds. Of the 98,582 reindeer, 67,448, or 69 per cent, were owned by 1,568 natives; 3,046, or 3 per cent, were owned by the United States; 4,645, or 5 per cent, were owned by missions; and 23,443, or 23 per cent, were owned by Lapps and other whites. The total income of the natives from the reindeer industry during the fiscal year was $97,515. The total number of reindeer, 98,582, is a net increase of 20 per cent during the year, notwithstanding the fact that 13,144 reindeer were killed for meat and skins, or were lost.

Reindeer fairs, or conventions, were held during the winter at Igloo, on Seward Peninsula; at Unalakleet, in the Norton Sound region; at Noatak, in the Kotzebue Sound district; and at Noorvik, on the Kobuk River. These annual fairs have become a recognized feature of the reindeer industry; they bring together Eskimos from a large extent of country, who spend a week together thinking about and discussing not only subjects relating to the reindeer industry, but also matters of importance affecting the Eskimos as a race. The competitions and exhibits promote interest in the various phases of the work; comparison of methods result in increased efficiency; personal intercourse makes for good fellowship and develops leaders who are recognized as such by the Eskimos themselves. An important result of the fairs was the organizing in northwestern Alaska of the Eskimo Reindeer Men's Association, the object of which is to awaken the natives to their own responsibilities and to secure united sentiment and action in important matters affecting the Eskimo race.

LIST OF PERSONS IN THE ALASKA SCHOOL SERVICE, 1917–18.

William T. Lopp, superintendent of education of natives of Alaska, and chief of the Alaska Division, Seattle, Wash.

Employees in the Washington Office.

William Hamilton, acting chief of the Alaska Division, Pennsylvania.
David E. Thomas, accountant, Massachusetts.
Edward D. Carmack, stenographer and typewriter, Tennessee.

Employees in the Supply and Disbursing Office, Seattle.

Harry C. Sinclair, supply agent, Maryland.
Chauncey C. Bestor, special disbursing agent, Washington.
Julius C. Helwig, assistant to superintendent of education, Indiana.
James O. Williams, clerk, Illinois.
Mrs. Iva M. Knox, stenographer and typewriter, Washington.

Employees in Alaska.

District superintendents of schools.

Walter C. Shields, northwestern district, Nome.
Walter H. Johnson, western district, St. Michael.
George E. Boulter, upper Yukon district, Tanana, until October 27.
Mrs. George E. Boulter, acting superintendent, upper Yukon district, Tanana, from November 1, 1917, to May 31, 1918.
Frederick L. Forbes, upper Yukon district, Tanana, from June 1, 1918.
Arthur H. Miller, southwestern district, Anchorage.
Charles W. Hawkesworth, southeastern district, Juneau.

Physicians.

Emil Krulish, M. D., Public Health Service, on special detail.
William H. Chase, M. D., Cordova, from October 1, 1917.
Linus H. French, M. D., Kanakanak Hospital.
Elmer C. Gross, M. D., Ellamar, to January 15, 1918.
Gadsden E. Howe, M. D., Ellamar, from January 16, 1918.
Frank W. Lamb, M. D., Akiak Hospital.
James P. Mooney, M. D., Juneau Hospital.
Daniel S. Neuman, M. D., Nome.
William Ramsey, M. D., Council, from September 1, 1917.
Henry C. Randle, M. D., Nulato Hospital.
Curtis Welch, M. D., Candle, from December 1, 1917.

Nurses, and Teachers of Sanitation.

Miss Mamie Conley, Kanakanak Hospital.
Miss Frances Dwyer, Juneau Hospital.
Mrs. Lula A. Evans, Unalakleet.
Miss Esther Gibson, Southeastern district.
Mrs. Carrie W. Lamb, Akiak Hospital.
Miss Mabel Leroy, Juneau Hospital.
Miss Jessie Libby, Akiak Hospital.
Mrs. Martha Mooney, Juneau Hospital.
Mrs. Lucia Petrie, St. Michael.
Mrs. Agnes A. Randle, Nulato.
Miss Rhoda A. Ray, Juneau Hospital.
Miss Mary G. Riff, Juneau Hospital.

Teachers and school attendance, 1917–18.

NORTHWESTERN DISTRICT—ARCTIC OCEAN AND BERING SEA REGIONS AS FAR SOUTH AS THE KOYUK RIVER, INCLUDING ST. LAWRENCE ISLAND.

Schools.	Teachers.	Appointed from—	Average daily attendance.	Enrollment.
Barrow	Delbert W. Cram	Washington	64	72
	Mrs. Belle C. Cram	do		
	Roy Ahmaogak	Alaska		
Buckland	Mrs. Iva K. Taber	do	17	21
Diomede	Arthur E. Eide	California	16	23
Elim	Thos. W. Schultz	do	50	62
	Mary K. Westdahl	Alaska		
Gambell	Jean Dupertuis	Washington	60	70
	Mrs. Elizabeth Dupertuis	do		
	Miss Flora T. Oonaluk	Alaska		
Igloo	Ebenezer D. Evans	Washington	25	33
Kivalina	Harry D. Reese	Pennsylvania	31	55
	Mrs. Harry D. Reese	do		
Kotzebue	Chas. Menadelook	Alaska	39	50
Noatak	James H. Maguire	do	35	53
	Mrs. Lillian C. Abercrombie	do		
Nome	Arthur Shields	New York	17	38
	Charles Kituk	Alaska		
Noorvik	Charles N. Replogle	Washington	115	182
	Delbert E. Replogle	do		
	Mrs. May Replogle	do		
	Mrs. Lydia Orealuk	Alaska		
Selawik	Frank M. Jones	Washington	40	60
	Mrs. Lulu I. Jones	do		
Shishmaref	John P. Jones	Alaska	40	47
	Miss Mollie F. Jones	do		
Shungnak	Fred M. Sickler	Pennsylvania	31	49
Sinuk	Miss Lucy R. Howard	Alaska	20	34
Solomon	Garfield Sitarangok	do	16	35
Teller	Mrs. Clara H. Fosso	do	26	34
Wainright	Earle M. Forrest	Washington	40	52
	Mrs. Elizabeth Forrest	do		
Wales	Arthur Nagozruk	Alaska	77	90
	Charles Kiomea	do		
White Mountain	James V. Geary	do	51	77
	Miss Hannah A. Geary	do		
Total			810	1,137

WESTERN DISTRICT—BERING SEA REGION, BETWEEN KOYUK RIVER AND CAPE NEWENHAM.

Schools.	Teachers.	Appointed from—	Average daily attendance.	Enrollment.
Akiak	Miss May Wynne	Kansas	43	60
	Miss Marie D. Bienerth	Montana		
Akulurak	Miss Mary Laurentia	Alaska	52	62
Bethel	Rollen H. Drake	Washington	42	61
Goodnews Bay	Frank M. Gwin	do	17	37
	Mrs. Margaret M. Gwin	do		
Hamilton	Mrs. Martha A. Fuller	do	21	35
Holy Cross	Miss Mary Bernadette	Alaska	95	96
	Miss Mary Thecla	do		
Hooper Bay	Ralph K. Sullivan	Washington	39	48
Mountain Village	F. W. Cobb	Alaska	21	38
Nulato	Miss Mary W. Salley	do	24	41
	Miss Mary Noemi	do		
Pilot Station	Elmer M. Hamden	Washington	22	29
Quinhagak	A. B. Scheel	Alaska	41	45
Russian Mission	Mrs. Corinne Call	Washington	28	37
St. Michael	Harry V. Johnson	Minnesota	30	57
Shageluk	Walter E. Cochran	West Virginia	24	40
Shaktoolik	Misha Ivanoff	Alaska	20	28
Unalakleet	Samuel Anaruk	do	46	71
	T. L. Richardson	Washington		
	Miss Eva Rock	Alaska		
Total			565	785

Teachers and school attendance, 1917–18—Continued.

UPPER YUKON DISTRICT—VALLEY OF THE YUKON AND ITS TRIBUTARIES BETWEEN 141° AND 157°.

Schools.	Teachers.	Appointed from—	Average daily attendance.	Enrollment.
Circle	Miss Evelyn L. Carey	Alaska	13	20
Eagle	Everett P. Frohock	Washington	10	32
Fort Yukon	Miss Winifred Dalziel	New York	36	64
Louden	Miss Nora Dawson	Missouri	8	10
Rampart	Miss Lula Graves	Alaska	22	27
Tanana	Mrs. Alice A. Boulter	do	4	17
Total			93	170

SOUTHWESTERN DISTRICT—BERING SEA REGION SOUTH OF CAPE NEWENHAM AND NORTH PACIFIC COAST REGION WEST OF 141°.

Schools.	Teachers.	Appointed from—	Average daily attendance.	Enrollment.
Akhiok	Mrs. Kathryn D. Seller	Alaska	40	54
Atka	Frank Cassel	Washington	18	30
	Mrs. Edna M. Cassel	do		
	Mrs. Angeline Cassel	do		
Chignik	Mrs. Lura Olsen	Alaska	23	31
Chogiung	Preston H. Nash	Washington	48	58
	Mrs. Katherine Nash	do		
Copper Center	Thomas R. Glass	do	8	23
	Estaco Ewan	Alaska		
Iliamna	Fred M. Phillips	do	11	28
Kulukak	James G. Cox	do	33	38
Port Moller	Walter G. Culver	Oregon	7	11
Susitna	Miss Katherine Kane	Alaska	17	38
Tatitlek	Chesley W. Cook	Washington	57	62
	Mrs. Mary E. Cook	do		
Togiak	Walter H. Johnston	Alaska	17	29
Tyonek	David F. Dunagan	Washington	21	37
	Mrs. D. F. Dunagan	do		
Ugashik	Walter S. Craig	do	16	32
	Mrs. Edith Craig	do		
Unalaska	Joseph W. Coleman	do	61	74
	Mrs. Marie Coleman	do		
Total			377	545

SOUTHEASTERN DISTRICT—NORTH PACIFIC COAST REGION EAST OF 141°.

Schools.	Teachers.	Appointed from—	Average daily attendance.	Enrollment.
Douglas	Miss Hannah E. Breece	Oregon	18	60
Haines	Mrs. Nancy L. Alexander	Alaska	23	43
Hoonah	Fay R. Shaver	do	26	87
	Miss Rena Crinklaw	California		
Hydaburg	James P. Wells	Oregon	55	107
	Mrs. Maye B. Wells	do		
	Miss Grace Myers	do		
	Miss Lillian Pierce	do		
	Mrs. Edith C. Schell	do		
Juneau	Mrs. Isabel Gilman	Washington	28	62
Kake	Charles E. Sydnor	California	17	118
	Mrs. Cora A. Sydnor	do		
Killisnoo	Nellie Mae Taylor	Missouri	20	76
Klawock	Charles E. Hibbs	Washington	52	84
	Mrs. M. W. Hibbs	do		
	Miss Nellie G. Orr	Idaho		
	Miss Helen M. Sullivan	do		
	Miss Mary Maloney	Alaska		
Klukwan	Amoe B. Carr	Washington	27	34
	Mrs. Ella D. Carr	do		
Metlakatla	William G. Beattie	do	102	188
	Miss Agnes Danforth	do		
	Miss Gertrude M. Kendall	Missouri		
	Miss Julia N. Kendall	do		
	Ernest Purvance	Oregon		
	Miss Frances C. Root	Alaska		
Sitka	Mrs. E. P. Brady	New York	23	74
	Miss Jeannette Wright	Washington		
Wrangell	Mrs. Sadie E. Edmunson	Idaho	13	29
Yakutat	Elof M. Axelson	Illinois	10	36
Total			414	998

Expenditures from the appropriation for "Education of Natives of Alaska, 1918."

Appropriation		$208,000.00
Salaries in Alaska	$108,411.39	
Equipment and supplies	24,598.38	
Fuel and light	21,765.27	
Local expenses	500.00	
Repairs and rent	4,332.00	
Buildings	22,679.03	
Destitution	2,852.20	
Commissioner's office salaries	5,023.33	
Seattle office salaries	8,400.00	
Commissioner's office expense	59.79	
Seattle office expenses	786.01	
Traveling expenses	8,519.49	
Contingencies	73.11	
Total		208,000.00

Expenditures from the appropriation for "Medical Relief in Alaska, 1918."

Appropriation		$62,500.00
Salaries in Alaska	$24,029.24	
Equipment and supplies	13,788.29	
Fuel and light	2,946.00	
Local expenses	2,200.00	
Buildings	14,398.97	
Destitution	2,708.78	
Traveling expenses	1,685.39	
Contingencies	743.33	
Total		62,500.00

Expenditures from the appropriation for "Reindeer for Alaska, 1918."

Appropriation		$5,000.00
Salaries of chief herders	$850.50	
Supplies	4,147.42	
Contingencies	2.08	
Total		5,000.00

Financial summary of native store companies of Alaska.

Companies.	Date of organization.	Paid-in capital, first year.	Date of last audit.	Stockholders.	Present paid-in capital.	Total net gain.	Total cash dividends on stock.	Total stock dividends on stock.	Total cash dividends on cash purchases.	Balance left in surplus.	Total capital, including stock dividends.
Metlakatla Commercial Co., Metlakatla	May 1, 1916	$2,295	Jan. 7, 1919	156	$19,817	$13,721	$5,208	$4,188	$2,116	$2,209	$21,140
Klawock Commercial Co., Bayview	Jan. 1, 1913	4,370	Feb. 1, 1919	93	8,538	11,379	5,614	5,362	....	403	12,790
Hydaburg Trading Co., Hydaburg	Dec. 1, 1911	4,020	Dec. 31, 1918	172	12,593	29,525	9,559	8,461	10,848	657	19,578
Atka Island Native Store, Atka, via Unalaska	Sept. 1, 1913	[1] None	July 15, 1918	[1] None	(1)	3,358	....	3,000	....	358	3,000
Wainwright Native Store, Wainwright	May 1, 1916	1,380	Nov. 30, 1918	....	1,575	2,329	141	....	....	2,188	1,575
Klukwan Mercantile Co., Klukwan, via Haines	1912	1,710	Mar. 24, 1919	31	2,980	[2] 3,000	2,159	....	[3] 841	(4)	2,980
Eskimo Building and Loan Association, St. Lawrence Island.[5]	....	....	....	....	....	....	....	....	....	....	....
Tyonek Native Cooperative Store Co., Tyonek, via Anchorage.	Mar. 2, 1917	950	Apr. 2, 1918	....	950	397	....	....	....	397	950
Wales Cooperative Store, Wales[6]	....	....	....	....	....	....	....	....	....	....	....

[1] This store was started entirely on credit, the capital to be created by the profits of the store and to be given to the native patrons in proportion to their patronage.

[2] This amount does not include the loss of the last year as shown by deficit.

[3] Estimated.

[4] Deficit, $548.15, as a result of last year of business.

[5] No audit to date. Statement of June 1, 1918, gives net worth of $7,865.28. Has no accounts payable; a complete stock of merchandise for year 1918-19, and a cash reserve in Seattle of $5,179.47 on Dec. 5, 1918.

[6] No audit to date, and to date has not been supervised by Bureau of Education. Has no accounts payable in Seattle.

PART II.—DETAILED REPORTS.

SECTION 1.—REPORTS BY SUPERINTENDENTS.

REPORT OF WALTER C. SHIELDS, SUPERINTENDENT OF THE NORTHWESTERN DISTRICT.

In the 20 schools within this district the number of pupils enrolled was 1,088, and the entire population of the villages reached by these schools was 3,960. Twenty-five white teachers were under appointment and 13 native teachers; one of the latter received payment in reindeer instead of in money.

Inspection.—All of the schools were visited during the year except Shungnak, and several were visited twice. The trips of inspection covered 4,052 miles, 2,664 by water and 1,388 by land. I was absent from headquarters 127 days. During the past eight years I have traveled on tours of inspection 25,264 miles, of which 11,005 miles were behind reindeer.

For cross-country runs and for three-fourths of the winter travel necessary in this district deer are, to my mind, far superior to dogs. They insure comfort, economy, and safety. On trails that are hard, especially on the coast, and where feed is hard to get, a dog team makes better time and can be cared for more easily. After the middle of April it is very hard to get deer that are still in good enough condition to be driven.

I consider deer better than dogs for three-fourths of the traveling I have to do. I have found more *comfort* when traveling with deer. Your outfit is not limited, as you can hitch on another deer if necessary. Each man has his own sled and has plenty of room. He can ride or run as he wishes, and his sled is loaded with the idea that the man is to ride. Good deer, well trained, and with good sleds and harness, can be controlled better than an equally good dog team. This will be disputed by every dog driver, but I still contend that good deer driven by lines can always be better handled than good dogs driven by word of mouth, just as a good team of horses can be driven better than a good team of dogs. I have found a deer team more *economical* than dogs for two reasons: The question of feed for the deer is taken care of by the country, and you have no roadhouse bills for the team. The greatest argument for deer is that they insure a greater degree of *safety* in a country where winter travel always has its menace. I have already stated that we are not limited as to the size of the outfit, which means that a deer man always carries a lot of extra clothes. The camping outfit is more complete than can be carried on a dog sled. The deer outfit is seldom less than three sleds. And three sleds make a camp which will stand up against any storm that I have ever met. There is always the assurance that at the worst a man can eat one of his deer. And over most of the country there is always food for the animals. The dog driver, if storm bound, is always haunted by the fear of running out of food for his team. Deer do not freeze, and if there is feed (which is invariably found), there is no condition that can arise, except an accident to which men and animals are always liable, which will cause the driver any fear for his animal. Dogs in severe weather require constant attention. Flanks will freeze and feet will bleed.

In all my winter traveling I know that I owe my comfort and safety to the devotion and efficiency of the Eskimos who guide me. Tautuk, Mukpeadeluk, and Orealuk are splendid fellows and deserve much more from the Government than they get and more from me personally than I can afford to give.

All the summer trips were made through the courtesy of the Coast Guard Service on the U. S. S. *Bear*. With the exception of Shishmaref, which is depopulated during the summer, the *Bear* touched at every station on the coast. The merchandise for the cooperative stores at Wainwright and Gambell were carried by the *Bear*, as were also the supplies for the teachers at these places and at Barrow. The school supplies for all points north of Kotzebue and for St. Lawrence were delivered by the *Bear*.

I wish to express my appreciation of the assistance and courtesy extended to me at all times by Capt. P. H. Uberroth and by all of his officers. Many times extra duties were performed by the officers and men of the *Bear*, which were often arduous and unpleasant. But at all times such assistance was rendered in a cheerful manner, and it was made plain that Capt. Uberroth believed in the work and wanted to do what was in his power to assist it. I was permitted to leave the ship for three days at Kotzebue to make the trip to Noorvik. First Lieut. J. F. Hahn accompanied me and made an inspection of the sawmill and electrical machinery at Noorvik. Mr. J. J. Dolan, electrician of the *Bear*, also made the trip and inspected the wireless plant. I wish to express my appreciation of the assistance and suggestions made by Lieut. Hahn and Mr. Dolan. Dr. Murray, of the *Bear*, in addition to the regular medical work, performed many special operations on the eyes of natives in the north who could not be brought to Dr. Neuman at Nome.

Teachers.—There are two things that the superintendent of this district takes great pride in—the Eskimos among whom we work and the teachers who do the work.

The work in this district is in the hands of trained and capable men and women. The teachers in this district are experts, and most of them have been in the service a long time. This accounts for the success with which they are doing their work. I am proud of the fact that the standard of village work in this district is of the highest, and that through the work and influence of these teachers the Eskimos in this district are devoted to the Government. All of these representatives of the bureau do their work at out-of-the-way places.

The most hopeful thing that I have to report this year is the great success in school and village work attained by our Eskimo teachers. The entire work at Kotzebue, Wales, and Solomon was under the direction of Eskimo teachers. At other places Eskimo assistants were employed with great efficiency. Wales is one of our largest centers and largest schools. This entire work has been under the direction of Arthur Nagozruk, and has been most efficiently done. He has been mayor of one of the best councils any Eskimo village ever had. He organized the reindeer men into a local club that has done good work. Wales has a large church building, but has had no missionary for several years. Arthur Nagozruk and Warren Adlooat, with the assistance of a good church committee, managed the church themselves. The school, mission, and village work at Wales the past year was very successful. It shows what Eskimos can do under the leadership of one of their own race. I consider the work done at Wales by the Eskimos under the direction of Arthur Nagozruk the past year the very best "exhibit" that our service has to show in this district.

At Kotezbue the work was under the direction of Charles Menadelook. He was a stranger to that section, and even had to become accustomed to the change in the dialect. Kotzebue is not an easy place, with its choice assortment of old-timers who pose as experts on everything connected with the natives. It has tried white teachers to the limit. Charles Menadelook took hold with considerable energy. He worked through the church and through the council and forced his personality on the entire village.

Both of these young men are a great credit to the service, and we should be proud of them. With such possibilities among the Eskimos there is every reason for us to look forward to the time when a great part of the work in this district (except the medical work) will be in the hands of Eskimo teachers. Both of these men, Nagozruk and Menadelook, are from Cape Prince of Wales, and received their early training under the present chief of this division, Mr. Lopp.

Population.—As I stated in the first paragraph of this report, the 20 schools in this district reach a population of 3,960. Outside of these villages the population is estimated to be about as follows: Barrow (the point), 50; Icy Cape, Point Lay, etc., 75; Point Hope and Lisburne, 325; Kiana and points below Shungnak, 75; Deering and Candle, 50; Point Wooley, Cripple, etc., 50; Cape Nome, 25; Koyuk, 75; King Island, 125; scattered, 50. Total population outside of villages with schools, 900. This would make a total Eskimo population for this district of 4,860. Last year I estimated the total population at about 5,000. Since that time Mr. D. W. Cram, of Barrow, reports that about 100 natives left Barrow for the eastward. Most of them, I presume, went over the boundary line. Noorvik is now the largest Eskimo village in this district, with a winter population of 403. Barrow is next with 354, and Wales with 348. Nine villages (including Point Hope) have a population of 200 or over. The average village would have a population of 200.

During the year in the 20 villages in which schools are situated there has been an increase of 49, being an increase of 1 per cent. There were 132 births and 83 deaths. Thus, as last year, the birth rate is about 3 to the 1,000, and the death rate 2 to the 1,000. Only 4 villages showed a net decrease in population: Diamede, Gambell, Solomon, and Wainwright.

General development.—Perhaps the most pronounced development among the natives is the great tendency to the increase of solidarity of the race. The fairs, the "Eskimo Magazine," their councils, and their Eskimo leaders are all bringing them closer together. They are feeling more pride in their race and are becoming more independent in their everyday life.

One of the most hopeful signs for industrial development for the Eskimos outside of the reindeer industry is the boom in herring and salmon fishing. A cannery has been operated at Kotzebue, employing native labor. A large herring packing plant is planned for Chinik this year, which will employ several hundred natives the great part of the summer. Fishing is work that appeals to an Esikmo in all of its different branches, and it is work at which the entire family can be employed. If these concerns that handle native labor for fishing can plan to develop their work along such lines that they can give natives a chance to own their own fishing outfits and then buy their fish; or if these concerns, after natives have been properly trained, will establish small fishing stations along the coast under the management of capable natives, and then work out some profit-sharing scheme for them; and if in connection with the fishing stations the concerns can arrange to pay for the native labor partly in supplies at a reasonable figure, then, under these conditions, I can see that the fishing industry furnishes a very fine chance for the Eskimos to obtain work for which they are specially adapted, and also gives them a chance to develop along independent lines.

I have never been able to become very enthusiastic over the future for Eskimos as wage workers. Some have been employed in mines with more or less success. But few Eskimos will stay with such steady labor, and in any case it puts them into competition with white labor, which always brings complications. However, the fishing industry is entirely different and to my mind offers the best industrial opportunity yet given the Eskimos outside of the reindeer industry.

The fur catch the past year was very good at places, especially Noatak, White Mountain, and Shishmaref. Lynxes were caught in great numbers up to Christmas and then left the country. The prices paid were the highest on record. There were several fur buyers who traveled over the country, bidding against one another and all paying cash.

Village government.—The village councils have developed more and more each year and have accomplished good work at each village. The councils have settled many problems and have strengthened the work of the school at each place. Among other notable things that have been done by village councils, I would report the action of the Shungnak council when a white man was brought into their village badly shot. The council met, commandeered the very best dogs in the village, irrespective of their owners, got the best driver, and sent the wounded white man across country to Selawik. That village, through its council, did the same thing, and relayed the patient to the hospital at Candle. The council at Wales became much worried when they heard the results of a survey of the prevalence of tuberculosis in their village. They met and passed a law that no one having tuberculosis could attend the big dances in the Kozge. This is something that Bureau of Education representatives have talked of, but which we all deemed impossible of accomplishment. The native council did it in a few minutes and made it hold.

War service.—The natives at White Mountain, Nome, and Igloo made cash contributions to the Red Cross. White Mountain gave over $150, much of it their new fund for the purchase of a sawmill. All the villages from Wales to Barrow collected eider down for the Red Cross. Over 1,000 pounds were collected. This represents quite a valuable cash contribution.

I believe every Eskimo man from Golovin to Point Hope wishes that he had a chance to help in the war. I do not refer to the sentiment along this line north of Point Hope, because I had no chance to talk with the people. The report was circulated that Eskimos would be expected to register. At once each teacher and official was approached by Eskimo men all eager to be taken as soldiers.

It is true that the Eskimos are few and that their race is barely on the increase; but we all know that almost every village has a surplus of men and not enough women. It would not harm the race for a part of them to go to war. On the other hand I can see great benefits to come from the use of Eskimos as soldiers. The race could receive an impetus that would advance it very rapidly. The young men who would return with the experience they would gain in the Army and with their knowledge of the power of concerted action would become the leaders of their people.

The Eskimo.—The little magazine started by Mr. E. D. Evans and myself two years ago has almost completed its second volume. It is still working along the same lines originally planned for it and is achieving the ends we had hoped for it. Through this magazine we have given the Eskimos a common meeting ground; we have brought them all closer together; we have interested them all in one another; we have given them something that makes even the most academic side of their education of actual use to them, for the magazine gives them something to read that is of direct interest to them. And all of this has been done without one cent of Government money. The paper does not as yet pay its own way, but those of us who are backing it feel that it furnishes us a very good way to make a direct contribution to the cause.

THE REINDEER SERVICE.

District supervision.—Most of the herds between Nome and Point Hope have been visited by the superintendent during the winter. Those that were not visited, with the exception of Shungnak, were fully covered by a visit to the station and meetings with the herders there. Through our paper, the *Eskimo*, and an extensive correspondence the Nome office has kept in touch with every herd and with many of the individual herders. The annual fairs furnish the best way to get into touch with each local situation. The fact that we have built up a system of supervision through the Eskimo head herders and the local reindeer clubs also furnishes an excellent substitute for the detailed personal work that used to be required of the superintendent.

Local supervision.—I can not overemphasize the need of the appointment of special men to take charge of the reindeer work over large districts. It is impossible to expect a teacher to do all the work that should be done. The demand upon each teacher increases each year as the work becomes more complex. It is very hard to get men who are qualified by training and temperament to study both Eskimos and reindeer. For our general educational work we must emphasize the former, but for our specialized reindeer work we should soon begin to emphasize the latter.

Diseases and breeding.—There has again been considerable hoof and joint disease in some of the herds. It will be hard to eradicate this without proper range control and expert supervision. Our campaign against the warble fly, which was encouraged by the *Eskimo*, did considerable good in arousing interest, but I question whether it did much to exterminate the fly.

The herds at Noatak, Kivalina, Selawik, and Buckland reported the presence of large caribou bulls during the rutting season. In several cases the bulls were unusually large and stayed through the entire season. This is our best chance to secure new blood, and we look for excellent results.

By care in selecting bulls from good stock and, as Mr. Lopp has pointed out, by making sure that the females are grazed on the best ground, we will be able to do a great deal to improve conditions in each herd. However, the fact still remains that we do certainly need a large supply of new blood. After the war it is to be hoped that some arrangement can be made under careful inspection to secure several hundred Tunguse bulls from northern Siberia for distribution.

Reindeer fairs.—The two fairs, at Igloo and at Noatak, surpassed anything that we had ever had before. The weather before the Igloo fair was very bad, and there was a deep fall of snow at Noatak. In consequence, the racing events at both fairs were made in slower time than before.

There is considerable similarity in all the fairs, yet each proves more interesting than the one before it. The way the Eskimos have taken hold, especially the head herders, is a continual revelation to all of us.

The Noatak fair grounds were located along a little creek bed in the foothills. Thick spruce timber surrounded the tents. The racing course was located on a small plateau, from which there was a splendid lookout over the entire course. A brief description of the outstanding features of the Noatak fair will give some idea of the work and of thought that Mr. Maguire put into it.

As we drove out to the grounds, 8 miles from the village of Noatak, we soon came to the upper end of the race course, which, through its entire distance, was outlined by neatly trimmed stakes, set at intervals of 200 yards; from the top of each stake fluttered a red, white, and blue pennant, the work of the sewing class of the school. On the plateau, where the races started, we were met by the crowd of delegates, who were lined up there ready to give us a cheer. On the plateau was a tent over which floated a large American flag, also a "reindee flag," the pride of the Noatak herders. This flag had a red reindeer on a white field with a blue border; this flag was about 10 feet square. The tent had a good stove in it, and it was reserved for the judges and secretaries, giving them a place where they could figure out the winners of the different events without freezing their fingers.

After this reception we were escorted down the little creek bed, and as we turned a bend we saw the main camp before us. A large WELCOME sign was posted high on a tree whose branches had been trimmed. A blue and gilt pennant of large size, with NOATAK in big letters, with trees on each side (the Noatak symbol), floated over the main tent. Between two trees was hung another big reindeer flag, and on the most conspicuous tree floated the largest American flag that could be procured. The Eskimo delegates lived in the big tent, and visitors camped in their own tents all around. The Eskimo delegates had their mess and the white delegates had theirs. The cooking class of the Noatak school cooked and served our meals and were awarded the blue ribbon as cooks.

The most impressive thing connected with the fair was the salute to the flag each evening. This was arranged by Mr. Maguire. At the beginning of the evening meeting in the big tent Mr. Maguire played a bugle call on the organ; then he began to play "My Country, 'tis of Thee." From the back of the tent came a procession. In front marched two of the most prominent head herders, each carrying a 30-30 rifle. Next marched an old Eskimo carrying the flag. He was followed by two of the younger reindeer men with rifles. They lined up in front of the audience and then all sang the first verse of "My Country, 'tis of Thee." During the entire verse the audience stood and held the right hand rigidly at salute. It was exceedingly impressive to see old, decrepit Eskimos, men and women, struggle to their feet and hold that salute. I noticed some of the old folks, who did not thoroughly understand the salute, holding their hand over their eyes, and I saw their lips move, as in prayer. There are no people who love and honor the Government more than do the Eskimos.

At both fairs this year we organized the Reindeer Men's Association on an experimental basis. Each station is to organize a local club. Their rules for admission are to be very strict. At the fair every two years (for we plan to hold only one fair a year in this district) each local club will send its delegates to what we called the District Meeting. At this district meeting the local clubs, through their delegates, will elect a board of head herders to supervise their work for the two years. We would like to see each reindeer station in both the northwestern and the western districts organize such local clubs. Then we should be able to arrange for delegates from even the most remote districts to attend each fair. This would tend to bind all the districts together, and would pave the way for our final plan—the election of a board of head herders for all the reindeer men in Alaska, two of these men to receive salaries from the association.

Each member of a local club is to pay annual dues of $2.50. Of this the local club is to keep $1 toward local affairs (erection of a club house, etc.) and 50 cents is to be sent to the treasurer of the district, for district expenses, including

NATIVE RED CROSS CHAPTER, JUNEAU.

A. NEW CANNERY BUILDINGS AT METLAKATLA.

B. SALMON READY FOR CLEANING AND CANNING, METLAKATLA CANNERY.

A. AT A FISH TRAP NEAR METLAKATLA.

B. A PILE DRIVER NEAR METLAKATLA.

A. NURSES AT JUNEAU HOSPITAL (CENTER) AND NATIVE GIRLS IN TRAINING AS NURSES.

B. MAY POLE AT METLAKATLA SCHOOL.

aluminum ear markers for the deer belonging to the association. The dollar that remains is to be sent to the *Eskimo* for each member's subscription. It is our intention, eventually, to make the paper the property of the association.

Each member also has to pay an initiation fee, in female deer, to the association. In this way the association, in several years, will have a large herd to draw from and should be able to raise quite a fund for its work. Having deer in each herd belonging to the association will make it easy for the Eskimos to make transfers to each other, over long distances, as a man can turn over a deer to the association at one herd, and the man he is doing business with can take a deer at the other herd.

It will take several years to work out this plan, so that it will be uniform and efficient; but I believe that in two years it can be fairly well organized in this district, and I trust work along the same line can be pushed in the western district.

There is much work to be done by some one for the reindeer stock itself, but this association, and the regular work through the fairs and the *Eskimo* will go a long way to do the needed work for the Eskimo personnel. And that is properly the work of this bureau.

The Eskimo.—During the year our little paper has published many articles by reindeer men on subjects of direct interest to all of them. They have shown their appreciation of the paper by allotting $1 of each man's dues to their local club for his subscription to the paper.

Reindeer owned by white men.—Lomen & Co. have done three things during the year that promise well for the industry and have benefited the native herds indirectly: (1) They have developed an outside market for all the meat that they can ship. Most of their meat goes to Minneapolis. During the year they have shipped about 624 carcasses. As far as I know, this is the first time such a large shipment has been made. (2) They have commenced to buy steers on the hoof for shipment to the States. The price paid is only $10 per head, which is all the company claim they can pay, with the risk of losing the deer before he can be butchered. Where there is a local market the Eskimo can retail his deer for more than that, but the local market is becoming very limited at present. So the chance of selling steers on the hoof, even at $10, has been welcomed by many herders. We have especially encouraged the large owners to sell their steers by this method, for in this way they leave the local market for the smaller owners. One herder has twice sold lots of 100 at this rate. (3) The company has made large drives of its steers from its various herds. Some of the drives have been clear across Seward Peninsula. This has been taken advantage of by the herders to get choice bulls out of other herds for mixing in their own herds.

The company has positively stated officially that they do not intend to make any attempt to purchase deer from native owners and have refused several offers to purchase deer from white men who secured herds for their children. However, there is always a possibility that there may eventually be friction between the native herds and the white herds. This may come on account of the mixture of native deer and deer belonging to the white owners. It is more likely to come over the question of grazing grounds. Some of the more shiftless herders enter the employ of white herds for wages and then lose their interest in the industry as reindeer owners. Possibly this will develop a class of professional reindeer herders, but there is a chance that some of these men will cease becoming reindeer owners, which will be a serious loss.

As long as Lomen & Co. and other white owners continue their present policy and as long as none of them enlarge their holdings by encroaching upon the deer that are held directly or indirectly by the natives, I believe that our work for the Eskimos is in no danger. Personally I am strongly of the opinion that the time has now come when we must look to the leaders of the Eskimos to do their part to hold their own people together. The Eskimos must understand that the time has come when as reindeer producers they must "make good." I believe that they will.

REPORT OF WALTER H. JOHNSON, SUPERINTENDENT OF THE WESTERN DISTRICT.

Travel and inspection.—It is reasonable to presume that each superintendent of schools has at some time arrived at a decision that his particular district was harder and more difficult to travel over than any other district in Alaska. Undoubtedly he has come to this conclusion after months of travel, probably at the end of an extremely hard run. It is necessary for superintendents to travel vast distances; it is only when weather and trail conditions exhaust man and beast so that it is impossible to proceed that camp is made before the goal is reached. If forced to camp where there is no fuel or shelter, an experienced superintendent manages in some way to build a fairly comfortable camp, and after satisfying his appetite from a larder containing food prepared for just such an emergency he lays out a plan of campaign for the morrow.

The extent of the district makes it imperative that, while traveling on his tour of inspection, the superintendent must take advantage of every opportunity for covering ground; upon arriving at a school or reindeer camp he must first of all see that his instructions regarding the preparations for continuing the journey are carried out, and that all is in readiness for an immediate start whenever he has completed his work at that particular place. Frequently it is necessary to make a run of only a dozen miles in the evening and then make camp, rather than stay all night at the station, for the next day's run may be over an unsheltered barren section 40 or 50 miles in length. On holidays and on Sundays, in rain or snow, from daylight often far into the night, until his destination is reached, the pace must be kept up.

Mountain ranges must be traversed, valleys crossed, ravines and rocky areas skirted, shortest distances through brush and timber ascertained, and a continual alertness exercised so that every natural condition be taken advantage of. At all times the strain on one's vitality is great, and he who can forget the trials and tribulations and take advantage of the occasional stretches of good trail and fine weather to recuperate is indeed fortunate. At the schools and reindeer stations the superintendent must settle questions of dispute, doing justice to all; he must supervise and inspect the work of the teachers, giving suggestions and corrections in such a way that all are encouraged; instill the feeling that their work is noble and uplifting, and has to do with the welfare of a people that is in dire need and well worth any effort that may be put forth to uplift them. He can not delay but must hurry away, even though a day's visit might help to cheer the teacher and bring about a fraternal feeling and result in closer cooperation, which is so necessary in this work.

During the fall and through the greater part of the winter very little snow fell; consequently travel was extremely difficult. For miles the ground would be almost free from snow, and what little was encountered in the gullies and grass was mixed with sand and dirt. The rivers and lakes were covered with glare ice frozen to a depth of over 6 feet; there were many overflows; shallow streams were frozen to the bottom. Not until the latter part of January did snow fall in any quantity. January 27 a warm spell, almost a thaw, seemed to bring on the snow, and thereafter it continued to snow nearly every day for a month. The warm spell continued for about a week, and the tundra was covered wih a foot of slushy, sticky snow. Unfortunately, much of my journey after this period was through a heavily timbered section.

After plunging through snow waist deep for several days we finally had to give up part of our trip. In the deepest snow we took turns snowshoeing ahead of the train of reindeer. Unless you have snowshoed in soft snow in a heavily timbered country you have no idea of the skill and labor that is attached to this kind of travel. The past winter I have traveled with sled over barren ground, glare ice, rough sea ice, in water a foot deep on the tide-swept flats near Hooper Bay, on sloughs filled with snow mixed with sand, in swamps where the grass was 5 or 6 feet long, over "nigger-heads" where the ground was worn away from them to a depth of 3 to 5 feet, in mud, on gravel banks, over rocks, in fact on almost every known kind of trail, but never have I experienced such difficulty in making headway as in the deep snow found in sheltered timbered valleys. In such a place snow must be packed down, deer staked out on the top of some ridge where the snow is not too deep for feeding, and the frozen tent carefully unrolled and set up. In cold weather the vapor from cooking and breathing forms a coat of ice in the tent that requires a day to thoroughly remove; then, unless you have food cooked in advance, it will take nearly an hour to cook the all-satisfying mulligan. I think that our outfit is the best available and that we have the camping system down to its *n*th power; still it behooves us to start our fire at about 4.30 a. m. if we would properly dry our clothing and be ready to leave at the break of day. This makes a 16-hour day, for it is seldom that work is laid aside before 8.30 p. m. These long, hard days are necessary if the itinerary is to be completed before travel becomes impossible, which happens directly after the April thaw and before the rivers are open for navigation. This year the ice did not leave St. Michael Bay until the last of June, consequently there was no travel during the latter part of the fiscal year.

Teachers and schools.—The teachers of the Alaska school service are, without a doubt, a most loyal and conscientious body of workers. They love the work and labor with the realization that they are working for the betterment of a class of people that needs uplifting and aid, mentally, morally, and physically. They teach with a definite aim, and every subject taught is put into practical use. The practical lesson is often passed on from native to native until all in the community are receiving the benefit of the teacher's work.

Many of the schools and villages worked for the Red Cross. Some picked the down from waterfowl and made pillows, which were sent to the hospitals. One village alone sent over 50 pillows; another sent 30 pillows and various knitted articles. Several schools and villages gave money. Many native young men requested permission to register for the draft, but were refused this privilege. I trust that they soon may have the opportunity to serve their country by being drafted and stationed in various posts of Alaska. The pamphlets issued by the Food Administration were sent to all of the schools. The teachers took advantage of this opportunity for much practical work. Many dishes were prepared by the cooking classes and meals served to children and parents. The regulations of the Food Administration were complied with as near as possible. A special effort was made to utilize and save the products of the country.

Medical aid.—It is extremely necessary that every section of this district should receive the aid of trained medical workers. Nurses who were stationed at Unalakleet, St. Michael, and Holy Cross cared for the patients of the immediate vicinities. The great number of cases successfully treated speaks well for the invaluable work done by them. In connection with the hospitals at Akiak and Uulato tubercular camps were maintained. As soon as possible arrangements will be made to enlarge these camps in order to care for more of the great number of consumptives scattered throughout the district. The doctors and nurses made trips to villages, the former traveling for weeks at a time, and yet they were unable to visit more than a small portion of the population. The surgeon at Fort St. Michael gave free medical aid to those who could not pay.

General conditions.—The Western District is blessed with natural resources that could care for many times the number of natives now living in it. The rivers teem with fish—salmon in the summer, while trout, eels, white fish, and various other varieties are caught during the winter. At almost no time during the year are the natives without fresh fish.

The tundra is covered with many kinds of berries that are easily preserved for winter use; it is simply necessary to store them in a cool place until winter and then let them freeze. The hills are covered with reindeer moss sufficient to supply for an indefinite time a hundred thousand reindeer. The only work necessary to preserve the herds is to keep watch, so that the deer do not stray away. Fur-bearing animals are found in sufficient numbers to pay for more than the amount of supplies that should be purchased from the stores. There are mink, ermine, muskrat, land otter, white, red, silver, and cross foxes, with an occasional black one. Marten and beaver are quite plentiful in certain localities. Black and brown bears, a few caribou, and an occasional moose are killed annually. The streams flowing into the Yukon River drain valleys that would supply lumber of fair quality, so that every native could have a good warm house and enough fuel to last for ages. But the native does not know how to utilize all that nature has given him; it is the duty of our Government to teach him how to reap the fullest benefit from what is so lavishly supplied him by a generous Creator; he must be trained and educated to utilize his own environment. It is a mistake to take a native out of the country for any purpose whatsoever. This is an argument for the establishment of vocational training schools in each district.

Vocational school.—A vocational school for the Western District should be located on the lower Yukon River, somewhere within a radius of 50 miles from Pilot Station. Suitable ground for buildings, fresh water, large areas for agriculture, good grazing ground for reindeer, timber, and fishing sites are all found in this area. It is also centrally located. In this school each industry of value to the natives can be taught. The youth of both sexes could learn by actual experience the best method of doing their chosen work. A reimbursable fund of $50,000 would start a cooperative store; it would also suffice for establishing a small cannery, where all kinds of food would be put up for local needs and for exportation; it would start a sawmill that would soon pay for itself by furnishing lumber to natives and whites; it would pay for the power boat that is an absolute necessity. At the reindeer herd methods for the improvement of the stock could be tested; the by-products, such as skins, hoofs, horns, tongues, fat, sinew, bones, and offal could be disposed of to the best advantage; study of diseases and parasites peculiar to reindeer could be made, and undoubtedly thousands of dollars yearly would be saved. Food for supplying a fox farm could be derived from cannery waste and the offal from reindeer carcasses. The older boys and girls could make a trip to the nearest sealing grounds and in a short time secure enough seal, oogruk, and walrus to supply the whole school with oil, fat, and skins. The doctor and nurse in charge of the hospital would teach sanitation and give lessons in first aid. In connection with this training school, adopted for the natives, would also be a church, hall, and wireless plant, all placed within the limits of a reservation of suitable dimensions to give room for expansion.

When we realize that the work of the average teacher embraces practically all of the above some idea of the magnitude of his task can be understood. As the teacher can only give a little time to each subject, progress is necessarily slow, and the pupil who is anxious to proceed along certain lines can receive but little more attention than the others. If a training school were located in the district the teachers could select suitable pupils and assist them in preparing for entrance to the vocational school. In a very short time pupils from every section of the district would be in attendance and the plant running to full capacity.

Reindeer.—As the number of natives owning reindeer increases the work of the representatives of the Bureau of Education becomes harder and requires more time. It will be many years before the natives will be able to properly manage their business affairs, and the reindeer that they own is the greatest business that they can possibly have. Therefore the Government should not relax its vigilance over owners who do not yet fully realize the great value that the deer are to them and the benefits that their posterity will derive from this industry. Up to the present time the bureau has concentrated its efforts in the training of men to care for deer and the introduction of deer into new sections of the country. The time is now at hand when these men must be trained in the management of their business affairs and taught to plan for the future development of the industry along well-established business methods.

It is to be deplored that some of the missions were so short-sighted as to overlook the future possibilities of this great material work by giving out the deer placed in their hands without placing any restrictions or regulations relative to their future care. These same missions sold the deer that were put in their charge for distribution, without regard for the moral obligation that they had with the Government. It is needless to say that most of the natives that received deer from them are following their example and are disposing of practically the only productive asset they have.

A few of the Eskimos who own large numbers of reindeer are beginning to realize how much there is to the industry, and come for aid and instructions at every available opportunity. These men have advanced far enough to see that there is much for them to learn. They are the hope and pride of the community, and if all restrictions were removed as to the sale of female deer to whites, they would not sell. It is only when practically all of the Eskimos have advanced to this stage that the bureau can relax its vigilance and feel secure that its work of many years will stand the test of self-management.

The Government herds at Hooper Bay and Pilot Station have been moved, the former toward the Yukon River, while the latter is now located at Shageluk.

Lomen & Co. purchased two large herds at Unalakleet, and occupy the ground formerly grazed over by the mission deer, and by the Lapps. Mr. Twitchell, of Iditarod, increased his herd by purchasing a large number from the Lapps located near Akiak. Mr. Kell and Mr. Williams also purchased several hundred deer, the former herding his deer near Ruby, while the latter has his herd near the Melozi River. With deer at Iditarod, Shageluk, Ruby, and Melozi, the eastward trend is now a reality. Plans are now in progress for driving the Goodnews Bay herd to Akiak and joining it with the Kalkag herd. Then this large herd will be driven to Copper Center, and the Indians of interior Alaska will have an opportunity of learning the industry.

The lack of snow during the winter made travel so difficult that the reindeer men did not hold the annual fair at Akiak. The fair at Shaktoolik was postponed, and finally a fair was held at Unalakleet. The interest shown and the work done was of a nature to speak volumes for the good accomplished at the gathering. The natives were encouraged to appoint their own committees and manage their affairs. Several meetings were in their charge, and only reindeer men were allowed to take part. The bureau's representatives outlined the work to be done, gave them a start, and then left them to carry out the plan, assisting only when some problem arose that had to do with the Government and the Alaskan code. These fairs are a wonderful stimulus for the industry and are invaluable as training schools and should be continued.

All meat offered for sale brought good prices, the lowest price paid being 20 cents a pound at St. Michael.

REPORT OF JOHN H. KILBUCK, ASSISTANT SUPERINTENDENT OF SCHOOLS IN THE WESTERN DISTRICT.

With the exception of the principal teacher in Akiak, the teachers in the four schools in the Kuskokwim region were new to the work among the Eskimos in Alaska. Although much handicapped on account of strange conditions of climate and of people, it is a pleasure to know that all of the teachers resolutely coped with drawbacks. The village work was especially well attended to, and in this way the new teachers quickly won the respect and affection of the natives. The teachers who remain are now in a position to gain greater results, both in the classrooms and in the homes of the people. The general feeling among the natives is in favor of the schools, and for this reason the usual rule is good attendance and good application on the part of the children. The Eskimo child is as eager for learning as are other children, and it learns quickly from a successful teacher.

The teachers at Bethel had to contend against the white man's dance. This form of amusement has taken a strong hold of the natives; the white men foster it and do everything to encourage it. The natives do not realize as yet that they are paying dearly for the pleasure they get out of these dances. This dancing craze has just come to Akiak, but the sentiment among the older people against dancing is strong enough, we believe, to prevent it from taking hold of the people to any great extent. After the teachers had emphatically set forth the dangers that go with dancing, the natives themselves placed themselves on record as being opposed to its introduction into their village.

At Quinhagak a number of miners and prospectors had for years been spending their winters. Here the missionaries and the teachers have forehandedly looked after the social part of the village life by furnishing harmless amusements for the entire community. Among the communities composed of natives and whites, Quninhagak must be given the credit of being the best-behaved.

There is another dance that must be taken into serious consideration, and that is the native dance called Kuvgagyagak, a dance in the nature of a potlatch. The more advanced of the natives are giving up this dance, but it is doubtful if it will become obsolete in the near future. One village invites one or more of the other villages to its dance, and besides entertaining the visitors, it will, as requested by the visitors, turn over to them any piece of personal property they request. Usually the hosts not only dance to the limit of their wealth, but draw on their credit as well. It is supposed that the visitors will give away stuff to equal or even excel the value of what they received from their hosts, but this seldom happens.

Quigillingok furnishes a good example of the evil of this play or dance. The Quigillingok natives had made a good catch of fish in the summer, and in the fall after the ice had formed they further increased their food supply with a record catch of tomcod. The previous sealing season had been good, and the catch of fur greater than it had ever been. The people were never better off in their lives, and being so well off they wanted to make their reputation. Accordingly they invited several villages to a play. Each individual wanted to outdo some rival in giving. The visitors went away well off, taking even the guns and traps of the hunter. Before the play was over a storm set in and lasted a long time. During all this time the hosts fed their guests and their dogs.

Before the sealing season set in the natives of Quigillingok were short of food and many were at the point of starvation. The season was backward, and if relief had not been obtained from the missionary and his wife almost the entire village would have succumbed to hunger. Rumors of their condition reached me. I deemed it wise to send a relief party with reindeer meat and what other provisions I could get. Three fat deer were butchered, which, with 100 pounds of flour, the same amount of beans, and 25 pounds of prunes, were dispatched in two dog sleds May 3. On June 15 I accompanied the missionary, Mr. Drebert, from Bethel in his motor boat to Quigillingok. From the store at Bethel I obtained 500 pounds of flour, 8 cans Eagle milk, 3 cans lard, and 100 pounds corn meal. We found 32 people at Quigillingok; the rest had either gone up to the fishing camp or were still at the sealing camps. These people were the worst off, and to them we gave the above provisions, which would tide them over to fishing time. We found one woman who had been left by her sister and brother to die. She was unable to stand, and as she was in a hut that had no roof, water and slime were all around her. She just had a dry spot her size; no food, not even water to drink. She said that she was waiting for the end, for there was nothing else to do. We made provision for her care, and on our return up the coast we looked for and finally located the brother and sister. I made it plain to the young man that something not very pleasant would happen to him if he did not at once go to his sister and take care of her. He went, and the woman is now getting well fast.

It is reported that children were allowed to starve, which may be true, for the people became dehumanized by hunger. I took one man who was far gone and managed to get him to the hospital. Dr. Lamb worked heroically with him, but we could not save him; he died July 14. Up to the time of my visit 23 had died at Quigillingok and 18 in the surrounding villages as a direct result from this shortage of food. Since then, I learned, 5 or 6 more have died. Quigillingok had a population of 300, and another village, Tshalin, had 200. Food conditions were unusually bad in the entire Kuskowin Valley, but these two villages suffered the most. The stores at Bethel, Akiak, and Quinhagak were sold out early in the spring; so that even miners and prospectors could not get a pound of flour. Mrs. Carrie W. Lamb donated the flour and beans sent to Quigillingok in May, and the Rev. Mr. Butzin the prunes; Mr. Butzin placed the dog team at my disposal, and later the launch, all free of cost. Much credit is due the missionaries, the Rev. Mr. Drebert and his wife, for the way they took hold of the situation, giving their own provisions and even cooking for as many as 180 people. It was no easy task to feed starving folks who wanted more than was good for them. Now that the people have recovered, they are loud in their appreciation of this unselfish couple.

The lesson of the whole matter is this: There was no occasion for this starvation; it was brought about by that play. Other people who did not have so great a supply of food weathered the adverse conditions of the spring in good shape. Quigillingok natives will have to work hard for years before they will get over the effects of this starvation. The dogs are all gone, nearly all of the huts have been burned. There are many widows with children who will have to be helped by somebody. This is a good time for either the Territorial or the Federal Government to prohibit these potlatches.

The work of the Bureau of Education is commanding the respect of the people of the Kuskokwim Valley by the establishment of the Government Hospital for Natives of Akiak. This hospital is a boon to the whole valley. Patients from the Yukon, from the headwaters of the Kuskokwim, from the mouth of the river, and from the bay as far as Goodnews have already taken advantage of this boon. To us old-timers it is a great privilege to see so many of these patients return home cured. The building is a credit to the builder who, virtually single handed, stayed with his job and did such conscientious work. The Kuskowin people, both white and native, are proud of their hospital.

And now what do we need more on the Kuskokwim? First and always more money, to put up modern schoolhouses at Bethel, Akiak, Quinhagak, and Eeek, and to establish new schools. Every school should have a gymnasium.

REPORT OF ARTHUR H. MILLER, SUPERINTENDENT OF THE SOUTHWESTERN DISTRICT.

During the fiscal year ended June 30, 1918, I have traveled by boat, train, automobile, dog team, snowshoe-mushing, and on foot 10,098 miles on tours of inspection of schools and native villages and attending to other official business in connection with the superintendent's office. These tours have occupied 245 days, the remainder of the year being spent in the office at headquarters, Anchorage, Alaska. Anchorage has not only proved a practical working center for the administering of the affairs of the district, but has made possible giving special attention to the natives of the Cook Inlet region. In this rapidly developing section the resources of the country are being utilized for commercial purposes. Inadequate provision is made for the native during the readjustment and special attention must therefore be given him.

All of our attempts to reach the school at Akhiok have thus far been unsuccessful. This is partly due to its inaccessible location, and partly to trying to include it in our itinerary when en route to other schools, and do so without excessive expenditure of the travel authorization. From the information I was able to obtain while on Kodiak Island, there is a population of 50 or 75 natives at Karluk who are without school privileges. There also appears to be a need for more effective medical relief for the natives of Akhiok.

In Knik and its vicinity is a native population of more than 100. Nearly all of the white residents of Knik have moved away from there since the coming of the railroad. The Territory having maintained a school at Knik, the writer discussd with the Territorial commissioner the advisability of arranging a transfer of the school building belonging to the Territory to the Bureau of Education.

There is also great need for a school at Perry. This village is practically isolated from civilized life, except as the natives, numbering about 100, visit the canneries at Chignik, more than 60 miles up the peninsula. When we visited Perry last May we were agreeably surprised when the natives hoisted the American flag as the steamer *Dora* approached their village. These natives have taken excellent care of the houses built for them by the Government in 1912, when they were brought as refugees from the Katmai volcanic eruption to this excellent hunting and trapping region as their future home. Many of the 22 houses visited by the writer were well kept and clean. The building now occupied by the trader would answer as a temporary living quarters for a teacher and as a schoolroom until a school building can be built.

The income of these natives last year was $1,100. This was derived exclusively from the sale of furs. If these furs had been sold at auction in Seattle they would have brought three times that amount, and $500 expended last year for the relief of destitution among these natives would have been saved. Between 30 and 40 children at this village have no school privileges or civilizing influence. I recommend that a school be established at Perry during the fiscal year 1918–19.

The need of a more clearly defined policy.—There appears to be a lack of well-defined understanding as to the responsibility for the care and education of certain classes of natives on the part of the Territory. In several instances the United States district judge for this district, who is custodian of the indigent fund, has referred calls for medical aid and assistance to breed natives to this office, for whom it is our understanding that the Bureau of Education can not be held responsible. We therefore feel the need for a more clearly defined policy establishing the responsibility of this bureau before the Territorial officials and the public in cases of this kind.

There is also a large number of communities in the Southwestern District, and very likely some in the other districts, where the Territorial schools have a small enrollment and native children are living in the same community, but not in sufficient numbers to justify the establishment of a native school. These native children are permitted to attend the Territorial school only in rare instances, and then at the option of the local school board. Where schools are already established it appears to be impracticable to compel the parents of white children to place their children in the same schoolroom with natives. It appears theoretically plausible, but it is, I believe, impracticable. However, in communities where all the patrons of the school petition for a school for mixed races permission should be granted accordingly. Evidence that this matter is receiving consideration in the Territory is shown by the following letter to me from Gov. Riggs, June 20, 1918:

> I have your letter of June 12, concerning the establishment of a school at Chitina, and I am glad to note that you see the necessity of such a school, and trust that some plan may be evolved whereby the native children can be given a measure of relief. The question of schooling of native children with the whites is a matter that we should endeavor to correct by legislation during the coming session. I think that where a school district applies for permision to establish a school for mixed races they should be given authority to do so. For instance, on the Koyukuk we have an application for the establishment of a school district at Wiseman, which we are unable to grant owing to the fact that 4 of the 10 children of school are are not of the white race. I should be very glad indeed to have your suggestions concerning proposed legislation.

Morals of the natives.—There is less immorality and debauching of natives living in this district at the present time than for many years. There is still far too much. The "dry law," which went into effect throughout Alaska on January 1, 1918, is one of the best measures for the protection of the native.

Patriotic activities of natives.—The natives of the Southwestern District are not only intensely interested in learning the facts concerning the present war, but they have everywhere shown their appreciation of the assistance rendered them by their benefactor, the United States Government, by doing what they can to help to win the war. The more prosperous villages have contributed cash donations to the Red Cross work, and in the villages where they were unable to give cash they have voluntarily made articles to be sold, and part or all of the proceeds from such sales have been given to the Red Cross Society. Reports show that not less than $500 has been given to Red Cross work by natives of this district, and after the fishing season more will be contributed by them.

Home guard organizations for military drill among natives at the different schools are in process of formation.

Many of the articles shown at the Anchorage Industrial Fair will be sold and the proceeds used to help finance the campaign against "Kaiserism."

Health, sanitation, and economic conditions.—There has been no serious epidemic during the year. About one-half of the school reports show about an equal number of births and deaths. The Copper River and Cook Inlet regions have had a slightly greater number of deaths than of births.

The villages of Koggiung and Akhiok have had considerable sickness. Considering the long and unusually severe winter, health conditions have been good. Monthly reports of the teachers indicate conscientious and faithful work on their part in rendering medical assistance to the natives during sickness. I have personal knowledge of teachers having nursed the sick through long periods of illness in a very efficient manner.

At those schools where water was obtained from swampy ground the endeavor has been made to improve the source of supply by driving of sand points that were sent by the Supply and Disbursing Office. These well points have thus far not been in all cases a success, and the villages of Unalaska and Tatitlek should have a gravity water system to supply the schools and villages. The water supply at Tyonek should also be piped from higher ground to the school building and village.

The great exodus from Alaska on account of the war is creating a scarcity of labor, and we are making every effort to induce employers to at least try native labor and give them an opportunity to earn their living. For the first time the Alaska Road Commission is employing about 25 natives of the Copper River to do road work on the Valdez-Fairbanks trail. The superintendent of the Copper River Railroad and the engineer in charge of railroad construction for the Alaskan engineering commission kindly consented to employ native labor and report their work quite satisfactory. About 25 of the English Bay natives have been employed at the iron mine at Port Chatham. This action, we hope, will reduce the destitution in the Copper River and Cook Inlet regions.

The Tyonek Native Cooperative Store is an evidence of the improved economic conditions at this village. This enterprise was started on but $950 capital stock, $950 loaned the store by the teacher, and on credit. Five hundred pairs of first-quality snow shoes were made by the natives and sold in Anchorage for $3.15 per pair. A net profit of $397.14 was made the first year, from sales amounting to $3,740.05. This spring $1,100 more was subscribed by the natives to the capital stock of the store. With a successful fishing season they would have been able to pay in this amount, but the king salmon run has been almost a failure, and unless the red salmon run is good most of this amount can not be paid in before another year.

Economic progress at Tetilek is in part shown by the fleet of 15 power boats, which is the principal factor in enabling the natives of that village to earn $25,000 per year fishing for the canneries and towing timbers to the mines and canneries. Five years ago these natives had no boats except dories.

In 1916 the Copper River Indians, through the extensive cannery fishing in the Copper River, were made almost destitute wards of the Bureau of Education, necessitating the sending of large quantities of supplies each year since that time. It was deemed bad policy to give the native these supplies outright if he was well and able to work. A building was needed in which to store these supplies, or to be used as a store building in case the natives ever became prosperous enough to start a store of their own. The labor in construction of this building was given by the Copper River Indians in return for destitution supplies. Most of the material was also obtained by their labor from the timber adjacent to the school building. The logs were cut, hauled, and peeled by the natives. The door and window frames and rafters were whipsawed from the logs, entirely by the natives. These natives do not expect aid from the Government without giving something in return.

The work of the schools in the Southwestern District shows steady advancement. The teachers, without exception, have rendered conscientious service. Teachers who succeed in their work among natives at isolated stations in Alaska deserve high commendation. They must be self-generating dynamos of energy. Theirs is a work for humanity; and the uplifter of humanity, though as a rule not highly paid in dollars and cents, has many rewards.

I desire to acknowledge the service rendered the Bureau of Education by the U. S. S. *Bear* in transporting the teachers and myself and supplies from Unalaska to Atka Island, and the courtesy and kindness of Capt. Uberroth in doing so much for our comfort and convenience during the voyage.

REPORT OF CHARLES W. HAWKESWORTH, SUPERINTENDENT OF THE SOUTHEASTERN DISTRICT.

This year special endeavor has been made to secure confidence in the children just beginning their school life. Those of us who have spent several years in teaching the native children of Alaska have been handicapped by having pupils in the upper grades who had not received proper training when they first went to school. To assist in giving the youngest pupils the right start we experimented in two schools with kindergarten methods and material. In Metlakatla the success we anticipated was fully realized, while in Klawock the teacher, on account of sickness, had to give up her work and return to her home in the States.

Another important aim has been to create in the parents an interest in the work their children are doing. Experience teaches that children will not get full value from their school unless their parents see the need of education. By the means of monthly bulletins sent to the 13 teachers in the district, showing exactly the progress made, we have created a local pride in each school and in each town to have the school as near the 100 per cent mark as possible. Usually what has been successful in one native village becomes well advertised in the others and each wants the same work. Thus by creating a good-natured rivalry between the towns in the district all are feeling the benefit of progressive education.

Another incentive we have introduced in the district this year is graduation exercises. The calls from the canneries usually come to the natives just before school closes, and one by one the families pack up their belongings and sail away for their summer work, leaving only a few pupils to complete the school year. That has meant that the interest dragged, and the last day of the school was without the meaning that it has for white children. To Metlakatla belongs the credit of introducing into the schools of southeast Alaska the first commencement exercises, two girls graduating from the eighth grade. Hydaburg has even more in the eighth grade than did Metlakatla, but the boys had to leave school before the year ended, so only four were there for the examinations.

The examinations at both Metlakatla and at Hydaburg were those prepared by the Territorial commissioner of education, Mr. L. D. Henderson, for the children of the white schools of the Territory, and our children had no knowledge of the nature of the examinations they were to get. They all did exceedingly well, showing that as we get more intensive work in the earlier grades and keep the children for the full term of school we shall be able to graduate boys and girls from the eighth grade who are as well prepared as are the boys and girls in the white schools.

The introduction of the school fair in the district has without doubt been of far-reaching value to the towns of southeast Alaska. The first fair was held at Metlakatla in the spring of 1917. Exhibits were forwarded to it from about two-thirds of the schools and visitors came from neighboring towns. The second fair was held at Hydaburg the first week in March, 1918. Exhibits were forwarded from many of the schools; about 40 people sailed to Hydaburg from Metlakatla, while 160 of the Klawock people came for the fair.

The second fair was the first real awakening of the people to the value of neighboring towns getting together to see what their children could do and what the children from other schools were doing. Fathers and mothers are very proud of their children, and it hurts them to see their children spelled down, when, if they had attended school regularly, they might have won the contests.

Not only do the children derive great benefit from these fairs; the parents are also benefited. One man at the Hydaburg fair made the remark that at the first fair almost none of the delegates ventured to stand upon their feet and talk out their ideas in the English language, but that at the second fair all the speakers spoke in English, and they talked with conviction.

These annual fairs promote civic improvements. The Klawock people built a sidewalk through their town, from one end to the other, when they knew that the fair was to be held in Klawock. Natives are apt to be careless about keeping up their houses and sheds, but when they know that people from neighboring towns are coming to visit them then they hasten to make their surroundings presentable.

As soon as school started last fall I adopted the policy of sending out monthly bulletins to all the teachers in the district. These bulletins contained suggestions for civic improvement, a summary of the monthly report cards in order that each teacher might see the percentage of attendance his school had made in comparison with others, and make a special effort to raise the average attendance of his school. The bulletins also contained statements of the Red Cross work of the schools in the district. The natives of southeast Alaska have been most loyal in their support of every patriotic move presented to them. Practically all the sewing of the schools has been for the Red Cross, and little children have made their socks for the soldiers. I am forwarding a list by schools of the money contributed by the schools and townspeople, as well as of the work done.

For the first time natives of Alaska are subscribing for local newspapers. One editor agreed to give us three columns of his paper, if we needed it, for the native news of the schools of the district. I instructed each of the teachers to have the advanced pupils write the items of interest in their towns, edit the articles, and forward them to the paper for publication. However, as this was a new departure, it did not meet with the success we expected. About 50 natives have subscribed for papers in order to get the Alaskan news as well as the news of the world war, in which they are very greatly interested. Many of the younger native men feel that an injustice has been done them in that they were not included in the selective-draft law for Alaska. They want to do everything in their power to assist democracy in this World War, not only in giving their money and the work of their hands but even their lives that "government by the people shall not perish from the earth."

The native people have at last begun to take a vital interest in securing the certificates of citizenship. The act of the Territorial legislature, "To define and establish the political status of certain native Indians within the Territory of Alaska," became a law April 27, 1915, but during the following two years only four men have taken advantage of the right granted. Their reason was that they were born on American soil and needed no certificate to prove their citizenship.

This matter dragged along until the Secretary of the Interior on December 15, 1917, ruled that "Indians or native Alaskan occupants (of land) who have secured certificates of citizenship under the Territorial laws of Alaska, shall be treated in all respects like white citizenship occupants." From the time this regulation of the Secretary became known in the district the natives have been most anxious to secure the certificates.

In order to facilitate the examinations which our teachers are required to give to applicants, this office has prepared a list of 35 questions on the fundamentals of our Government which an applicant for citizenship must answer and understand before the teacher will make favorable recommendation to the district judge upon the application of the native.

Statistical report of the Red Cross and other patriotic work of natives in the 13 villages in southeast Alaska.

Villages.	Red Cross members.	Liberty bonds.	War savings stamps.	Entertainments.	Other sources.	Total war relief funds raised.	Sweaters made.	Socks.	Wristlets.	Gunwipes.	Scarfs.	Bed socks.	Hospital garments.	Operating leggings.	Moccasins.
Metlakatla	133	$2,000	$25.00	....	$173.90	$2,198.90	2	23	....	....	....	66	24	18	...
Hydaburg	84	100	54.00	$6.25	152.45	312.70	13	1	13	20	13	....	....	....	...
Klawock	142	3,450	75.70	26.05	76.00	3,627.75	....	4	12	200	9	....	....	....	...
Wrangell [1]	......	......	......	....	....	....	....	....	....	....	....	....	....	....	...
Kake [2]	98	......	50.00	130.00	225.75	405.75	....	....	....	....	....	....	....	....	...
Juneau	100	450	......	59.00	100.00	609.00	1	100	24	....	....	....	....	....	...
Douglas [1]	......	......	......	....	....	....	....	....	....	....	....	....	....	....	...
Haines	91	450	50.00	130.00	191.00	821.00	....	102	5	....	....	....	....	....	...
Klukwan	100	......	......	101.00	....	101.00	....	35	42	....	8	....	....	....	...
Hoonah	262	400	......	90.60	143.70	634.30	....	37	13	....	....	....	....	....	...
Killisnoo	145	......	10.00	....	168.00	178.00	....	26	4	....	....	....	....	....	...
Sitka	148	2,850	19.00	304.45	....	3,173.45	....	....	....	....	....	....	....	....	12
Yakutat	......	......	......	259.00	....	259.00	....	....	....	....	....	....	....	....	...
Total	1,303	9,700	223.70	1,106.35	1,230.80	12,320.85	16	328	113	220	30	....	....	....	12

[1] No report.

[2] No material for making garments was received until after school closed.

SECTION 2.—REPORTS BY PHYSICIANS.

REPORT BY DR. JAMES P. MOONEY, IN CHARGE OF HOSPITAL AT JUNEAU.

The hospital at Juneau has continued to increase in popularity, and as the natives learn more of what can be done for them they will continue to patronize the institution in increasing numbers.

I have felt encouraged with the work because this year I have had more of the acute cases—those cases where more can be hoped for on account of an early operation. It shows that they are becoming educated to the advantages of modern medicine and surgery. Even their medicine man or witch doctor came for treatment and was much pleased with the results.

I find that there is still much superstition among the natives, and I believe it will take many more years to eradicate it; perhaps it never will be entirely eradicated. During the year I have come in contact with two cases where their belief in witches had very nearly caused the death of two people. The intent was to kill, no doubt, but fortunately it did not succeed. Recently I visited a case where an old man was allowed to suffer from neglect for the reason that he was accused of being a witch doctor. However, even though there is still this superstition to contend with, the hospital work is extending its area of usefulness. I find that all parts of this district have been reached by the hospital and even some places beyond its limits. We had one case from British Columbia and another from Copper Center. This man from Copper Center was sent to us because at the time he could not reach the hospital in his district.

About half of the cases admitted into the hospital were from the two towns of Juneau and Douglas. The greater number of the surgical cases have been from other towns and villages. . Sitka comes first, Killisnoo second, Hoonah third, with 18, 16, and 11, respectively, and the remaining 47 from Yakutat at the westward to Hydaburg on the south, almost every town and village having been represented. We have had patients from Skagway, Haines, Klukwan, Funter Bay, Chatham, Gambier Bay, Hawk Inlet, Auk Bay, Kake, Karheen, Klawak, Metlakatla, Ketchikan, and Wrangell.

The total admissions from July 1, 1917, to May 31, 1918, were 165, representing 3,086⅔ days' treatment.

During the month of May our admissions showed a marked decrease, and much of that was due to the general condition of affairs, state of health, and early fishing season. Some one has said, "The native hasn't time to be sick in the summer." In a sense that is true, for they are exceedingly busy at that time preparing for the fishing season.

The past winter has been a rather trying one on everybody, more especially the natives in the villages of Douglas and Juneau. There is so much snow that they have been shut in more than usual. But even so, I think the general health has been comparatively good. The most important factor has been the uniformity of weather. It is the sudden changes that play havoc with most of us. The weather this spring being ideal helped to ameliorate the otherwise unfavorable conditions. The snow disappeared rapidly.

One of the important things that has occurred this year was the inauguration of a training school for native nurses. We have only one pupil nurse, but she has made splendid progress. Miss Scott is a young woman of unusual qualities and very capable. There have been several who made application for training, but with one exception they were too young or not suitable in other respects, in the judgment of the management.

Thus we have carried into effect one of the long planned policies of the Bureau of Education, and one that is expected to develop into a great good to the native. We have endeavored to give the nurse in training a course of study, as well as practical training, so that she might have a better understanding of her work.

The general class or kind of work this year has been very similar to that of last year. I have not had quite so many major operations this year, but some of them were more serious. Unfortunately there were several cases that had waited too long, which made their chance of recovery slight.

A résumé of the work follows: Laparotomies, 23; gall bladder cases, 1; hernias, 4; nephrectomy, 1; cancer, 3; amputations, 5; cystotomy, 1; bone cases, 4; adenitis, 2; circumcisions, 3; perineorrhaphy, 5; curetages, 5; ethmoiditis and polypus, 1; hemorrhoids, 1; anal fistula, 1; tonsil cases, 19; deliveries in the hospital, 10. I have attended several deliveries in the villages during the year.

Aside from two or three cases of influenza we have had no contagious diseases. There were a few cases of pneumonia, about evenly divided between the adults and children. There have been a number of cases of tuberculosis that came to the clinic, which needed hospital care and attention.

We have made a few repairs and improvements on our hospital building, which make it much more comfortable and efficient. Since the weather has permitted we have been endeavoring to make the grounds about the building more attractive and sanitary. But there is much to be done before the grounds will be in keeping with our building.

ANNUAL REPORT OF DR. FRANK W. LAMB, IN CHARGE OF HOSPITAL AT AKIAK.

The hospital which was under construction when I arrived was finished the middle of January, and the first patient was admitted on the 26th of that month.

Patients have been admitted to the hospital from McGrath, Salmon River, Marshall, Anvik, Bethol, Quinhagak, Iditarod, and Quigillink. This proves that the hospital is centrally located and a good field for work.

The following is the number of cases treated during the year: Hospital cases, 33, number of days treatment, 639; out patients, 377, number of treatments, 2,327; surgical cases, 14, number of treatments, 233; obstretical cases, 11 number of treatments, 69.

Natives were treated in the following villages which I visited during the year: Anvik, Bennetts, Marshall, Russian Mission, Tundra villages, and all settlements along the Kuskokwim River from Bethel to McGrath.

Some of the tubercular cases have been treated in tents. The natives have been instructed in regard to tuberculosis, that it can be prevented and cured, but not by the way they are now living. A slide was made from a tuberculous gland and placed under the microscope, and all of the natives both young and old were brought to see it. It seemed to make quite an impression. They were also shown pictures of the diseased conditions caused by tuberculosis.

There are only three or four cabins in the village that are clean and fairly well ventilated; the rest are dirty and insanitary and poorly ventilated. We expect these natives to build in a short time. It is not much work to get the natives to put in ventilators, but it is a problem to prevent them from closing the opening with cloths.

This spring the hospital grounds were cleaned and drained. Brush was piled and burned. Several large holes that had been old igloos were partly filled with dirt. These holes have been used for a dumping ground and were very insanitary. The burying ground, which was a short distance back of the hospital, has been closed. The problem of closing up the old council hall was solved this spring by the high water caving it in. All the pools of stagnant water were drained.

The natives all put in gardens this spring. They are all good gardeners.

There were 42 deaths on the lower Kuskokwim River, from Quigillink down for 60 miles. The failure of the seal hunt on account of the heavy ice in the bay and a large potlatch that was held was the cause of their shortage of food.

ANNUAL REPORT OF DR. ELMER C. GROSS, ELLAMAR, IN SOUTHWESTERN ALASKA.

The work was conducted in the same manner as for the preceding year. Two regular visits a week were made to the village of Tatitlek. On one visit the children were seen in the schoolroom and special attention given to eyes, teeth, and throats. The children were questioned by the teacher as to the health of those at home, and any case of sickness reported was given attention. On the other weekly visit special attention was given to the adults and children not of school age.

Among the eye diseases of children gonorrhoea played the chief rôle. This I think is due to the fact that adults are very slow to report the existence of the disease, and being very insanitary in their habits about the homes the disease is contracted by the children largely through the use of towels and bedclothes. It seems impossible to convey to the adults the idea of infection and the danger of transmitting a disease from one to another through the use of dirty dishes, towels, and bedclothes. Ten separate cases of gonorrheal eye infection were treated, and two of these had reinfection.

Through the valuable assistance of Mrs. Cook, the teacher, in giving routine treatment daily in certain cases, the results in nearly all were very satisfactory. In no case was the eyesight lost. I made it a routine procedure to protect the eyes of the newborn by the use of silver nitrate or argyrol. I had only one case of gonorrheal eyes in the newborn and this was one we missed in the prophylactic treatment.

Bad teeth are a source of much trouble among the children. Practically all of them have bad teeth. There were many cases of abscesses due to decayed teeth, and many cases of ill health were undoubtedly accounted for by the condition of the mouth. It is a well-known fact that dental caries is the sole cause of many serious and distressing conditions of ill health, such as rheumatic conditions, gastric catarrh, and probably also appendicitis and ulcer of the stomach and bowel, indirectly. The adults as a rule have good teeth, and I am at a loss to account for such a universal presence of bad teeth among the children. They eat much cheap candy and usually that of the colored variety. They take no care of the teeth as a rule. Both the temporary and permanent teeth are extensively affected, and it seems certain that a large proportion of the younger generation will be almost toothless at the age of 25 or 30. It would be a great boom to the health and welfare of these children, if they could be cared for by a good dentist at least two or three times a year.

Syphilis was not as prevalent as might be expected, although inherited syphilis may be quite a factor in the condition of the teeth among the children. Four cases of chronic syphilis were treated during the six months. I did not see a case of primary or early secondary syphilis. The syphilitics were treated by neosalvarsan and mercury; the former given intravenously.

Tuberculosis continues to be the great plague for the native of this district. Six deaths were directly due to this disease, and in several children or infants this was probably an indirect cause. Irregular and poor nourishment part of the time, together with ignorance of cleanliness and sanitation, account largely for the prevalence of this disease and the difficulty in combating it. In one of the more progressive families, where the father and one child were tubercular, it was surprising how much better they got along than in the families where all instructions were disregarded and no attention given to proper food or fresh air in crowded rooms. The child, a little girl of 10, had both lungs affected, and examination of the sputum showed it teaming with tubercular bacilli. When I saw her last she had gained in weight and was looking splendid. I believe she will get well. The greatest difficulty in combating disease among the children is that the ignorant and conscienceless parents do not give them half a chance. I believe that as the younger generation grows up the work of the conscientious teachers in the schools will begin to manifest itself in the homes, and when the home conditions are better, great things can be accomplished in the schools for the physical, mental, and moral good of these people.

ANNUAL REPORT OF MRS. L. G. PETRIE, NURSE AT ST. MICHAEL, IN WESTERN ALASKA.

During the fiscal year 1917–18 I have had 1,912 cases, have visited 808 village patients, treated 773 bed patients, given 5,934 treatments, and made 3,377 house visits. This includes visits and treatments given on the following trips out of St. Michael: Sourdough and Stebbins, July 30, 1917; all the fish camps on the coast of St. Michael Island and on the canal, December 10, 1917, January 15, 1918, and February 28, 1918; Egg Island, May 15, and Klikitarik, May 30, 1918.

There have been 13 deaths here at St. Michael. Most of these were advanced cases of tuberculosis, whose vitality had been lowered by an epidemic of tonsillitis which swept the village. There were six deaths at Sourdough.

There were many abscess cases this year. Most of these were cervical and axillary abscesses and otitis media. There was one lumbar abscess treated for eight months, and one inguinal treated for six-months and still under treatment.

The daily clinic plan has been followed. The patients and others present are shown how to make dressings and are given talks on the care of the eyes, ears, nose, and general health; also on the necessity for good ventilation in their homes and the need of individual cups, towels, etc., where there are members of the family who have contagious diseases. I have distributed sputum cups and taught them how to use them properly, and have cautioned them to be careful always for fear of their disease spreading to others. I have encouraged the reducing of the number living in small houses, and shown them why only one family should live together.

I visit each house every Saturday to see that the weekly scrubbing and cleaning of the cabins have been done. At first a good number of them had not been scrubbed when I came; now nearly every one scrubs regularly on Saturday. Every family has a wash day once a week. Some of the cleaner ones wash twice each week. Several asked to have their houses fumigated after the death of some member of the family who died of tuberculosis, several also asked for chloride of lime for disinfecting drains, holes, etc., outside of their cabins. This is encouraging, as heretofore they have had to be forced to do this.

Once each week all the school children were thoroughly examined for cleanliness and symptoms of disease and disorders. During this examination they were lectured on the necessity of cleanliness. Record of each child's comparative neatness and cleanliness was kept on a blackboard where all could see. The one having the highest record was awarded a prize.

The larger school girls were taught bandaging and minor dressings. They were allowed to assist in the dressing of eyes, noses, and throats. They were instructed in the absolute necessity of cleanliness in surgical dressings and shown how to sterilize instruments.

The villages of Sourdough and Stebbins are cleaner than they have been any previous year but they are far from sanitary. The people there insist upon placing their dead upon the ground several feet back of their houses instead of burying them. I have tried to show them how dangerous this practice is, but they are reluctant to give up the old traditional custom. If it is not discontinued this summer, however, I shall notify the authorities here and ask them to compel the natives to bury their dead.

Many of my patients during the summer are natives from the coast all the way from Unalakleet to Hooper Bay and many from up the Yukon. Many of these have been in need of medical attention all winter, and so are advanced and chronic cases.

The village clean-up here at St. Michael was a very thorough one. All the garbage and waste were carried down on the ice or burned. The yards were all raked and set in order. The beach above the tide line was also cleaned. After the clean-up Dr. H. C. Miller, of the United States Medical Corps, inspected it and declared it sanitary. The village in general looks much cleaner and more orderly than any previous year.

SECTION 3.—REPORTS BY TEACHERS.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT WAINWRIGHT, IN ARCTIC ALASKA.

By Earle M. Forrest, Teacher.

This is an isolated community, our only white visitors last year, with the exception of the boats in August and September, being Archdeacon Stuck, in February, on his way from Fort Yukon to Herschel Island, thence back to Fort Yukon, and in May our nearest neighbor on the south, Mr. Thomas, the Episcopal missionary from Point Hope. For 10 months we are icebound, having water communication only 2 months of the year, during which time the ground thaws to a depth of 5 or 6 inches, the ground willows bud, and a profusion of wild flowers appear on the tundra. There are no native berries, and it is impossible to raise vegetables and flowers except in window boxes indoors, transplanting to cold frames outside for a short time. By this method we have had plenty of fine lettuce for three summers while the nasturtiums in our window box grew 4 feet high last summer and were covered with blossoms for weeks.

After three months, without communication with the outside world, the first ship of the year, the gas steamer *Herman*, reached here on July 23, bucking her way northward through the thickly drifting ice. We paddled out in an oomiak, portaging over stationary ice en route, to where she had tied up to a big cake caught on the bar, and we received a cordial welcome from Capt. Pedersen, our first news of the United States being at war with Germany, and our first taste of fresh fruit for 10 months.

On the 10th of August the Coast Guard Cutter *Bear* arrived, bringing our personal supplies, the greater part of the goods for the native cooperative store, and Supt. Shields on his summer trip of inspection. It is of inestimable value to us in this far northern section to receive this yearly visit from Supt. Shields, with its opportunities for settling troublesome questions and obtaining advice and encouragement. The *Bear* returned from Barrow early on the 12th, and we spent a delightful and extremely busy day, discussing business matters with Mr. Shields, consulting with the ship's doctor in regard to difficult cases, closing the mail with its shipment of furs from the native store, and visiting, with the outgoing Barrow teachers, Capt. Uberroth, of the *Bear* and others who spent the day on shore.

In the schoolroom.—School opened in September, as usual, and the school work was continued along the same lines as last year. Special mention might be made of the drills in diacritical markings and phonetics. They were found to be a great help in overcoming the tendency to confuse *p* with *b* and similar errors of pronunciation common among the Eskimos. All classes above the first were sent to the board frequently and given a list of words to mark. They then exchanged places and corrected one another's work.

Another helpful exercise was to require each one to find 10 words with each marking of a designated vowel. They would invariably begin to look through the entire dictionary for 10 of one particular marking first, passing by any number of the other required markings until its turn came. This same singleness of purpose and inability to concentrate on more than one object at a time is shown by the reindeer men in lassoing. It seems impossible to teach them that when they start out to lasso four sled deer it makes no difference in what order they are caught. They start after a certain deer and one of the others can literally run over them without one making an attempt to catch it.

During the mathematics period a good deal of work was given in connection with the native store; use of the scales was taught, bills were made out, and practical problems given. The reindeer apprentices and older boys worked reindeer problems and were taught to make out the annual statistical report. They learned the latter so well that the No. 2 Herd report was made out without a single error by one of the apprentices at that herd this spring.

Industrial work.—Two days a week were devoted to industrial work, besides a period each of the other three spent in drawing or painting. We found this plan of taking two entire days much more satisfactory than half of each, particularly in the classes in cooking, sewing, and woodwork. The kindergarten classes were an exception to this, having both lessons and busy work during each session daily. At least one baking of yeast bread was made each Tuesday and Thursday, often two or three, the pupils bringing their own flour or that of some family who wished bread made. We furnished the dried potatoes and other ingredients for the yeast as an inducement to them to make yeast bread, baking powder biscuits, and a sort of unsweetened doughnut fried in seal oil being the popular forms of bread here.

Besides bread, rolls, biscuits, dumplings, cookies, doughnuts, cinnamon rolls, and several kinds of candy were made frequently by the class. Instruction was also given in the preparation of dried fruits, beans, split peas, rice, macaroni, and other staple foods.

Ten aprons, 19 dresses, 15 boy's shirts, 4 baby's dresses, 8 baby's skirts, 4 bibs, 6 rompers, 22 snow shirts, with fancy trimming, and 8 pairs of curtains were made by the older members of the sewing class, while the little girls pieced patches for a quilt, hemmed handkerchiefs and tea towels, made themselves workbags, and learned feather stitching and crocheting. A special effort was made to teach the women and girls to finish their snow shirts neatly and make them to fit the artige over which they were to be worn. All of the boys did some simple sewing, darned socks, and knit mittens, some of them even making themselves shirts. Twenty-one pairs of gloves and mittens, a child's sweater, three pairs of wristlets, and three pairs of child's stockings were knit, and a belt and a number of edgings crocheted. Two mattresses, filled with reindeer hair, were made, and a large cloth doll was stuffed with hair and dressed in native style.

The class in woodwork was particularly instructed in the proper use of the various tools, and repeated one piece of work over and over until they could do it neatly. They made themselves boxes with lids, put handles on knives, built ventilators and a Christmas tree, designed a variety of good, original patterns, which they worked out in table mats; and, besides working on a number of personal effects, did the necessary repair work about the schoolhouse and grounds. We were barred from other woodwork by lack of material.

The schoolroom was used as a workshop by village men outside of school hours almost every day, sleds, stoves, stovepipe, spears, knives, etc., being made. There was a great demand at first for hammers and hatchets, and I was interested in seeing the use to which they were put. The hammer head was cut V-shaped, the head of the ax was cut off across the top of the hole for the handle, and the hammer head fitted into this and riveted, thus making a small edze, which is the native's favorite tool and is used in all kinds of work.

Sanitation and health.—This has been one of the bad years in point of number of deaths. As against two deaths last year, both due to tuberculosis, we had eight this year, nearly all due to the same cause. Tuberculosis of the lungs is the worst evil here. Other contagious diseases are few, but almost every home has at least one tubercular man, woman, or child. It is pitiful to see them succumb to this disease. We have given the question a great deal of thought, and, aside from simple measures of prevention, can find no solution for the problem of checking the spread of tuberculosis in this locality. It is not at all feasible to consider isolating those subject to it, as in some instances as many as three members of one family already have it, and all may linger for years, while some of the oldest cases are men who are the best hunters in the village, men who kill more seal and oogrook a year than anyone else, and keep their families well provided for. To thing of having them live in tents the year round is also out of the question in this climate. Snowhouses in winter would not serve as substitutes, since new ones have no more ventilation than sod igloos, and old ones are too cold.

There have been daily calls for medical attendance for all sorts of ailments, a number of cases requiring daily visits to the igloo, and the preparation of a diet for several days in each case. In addition to medical aid given, we have tried at all times to improve the health and surroundings of the approximately 200 people directly or indirectly under our care by friendly suggestions and criticisms made on visits to the homes, by public talks, by preventing the overcrowding of igloos, by urging their moving into tents as early as possible in the spring, and by whatever other means seemed best suited to cases as they arose.

The usual summer clean-up took place last July as soon as the snow was melted, but on account of the daily arrival of boatloads of walrus meat, blubber, and skins, it was difficult to keep it clean throughout the summer.

The village council is performing its duties this summer with increased zeal, and heavier fines will be imposed for disobedience of the rules. Sixty-five sacks of coal have been collected as fines for loose dogs, uncleanliness, and other offenses; the coal bin for school and residence has been kept filled; a splendid snow hallway to the schoolhouse was built last fall; and a variety of other matters were attended to throughout the year by the five members of the village council.

At the close of our third year at Wainwright we feel there are a number of conditions which combine to make this an unusually desirable village in which to work. The natives are of a very peaceable disposition, exceptionally honest, and sincere Christians. There has not been a case of stealing or a quarrel among them during our residence here. Disagreements that occur are taken either to the village council or to the teacher for settlement and their decisions abided by without question.

The School Republic was conducted after the plan introduced last year, and those elected fortnightly for the purpose performed the duties of fireman, janitor, bell ringer, primary monitor, etc.

In connection with both the School Republic and the village council, it must be remembered that most of the time the teachers are the only ones here who talk English. The natives do not hear English spoken as they do at practically all other villages, and have never seen white men living together, obeying certain laws, and governed by certain of their number; so they have greater difficulty, both in trying to grasp the idea of self-government and in acquiring the use of English, than other natives would.

Resources.—In the matter of income the past year has been a very satisfactory one from most points of view. The native store has accepted coal all winter in payment for goods, so there has been no shortage of food here, all that was necessary when anyone was out of tea, sugar, or other staple foods, being to drive 6 miles to the nearest coal mine and bring back four or five sacks of coal.

The ice cellars were well filled with meat last summer, 140 walruses and 13 polar bears being killed in the month of July alone. The ice broke up on the 8th of July, but there were ice fields in sight until the 8th of August, and herds of walruses were numerous on this drifting ice. The boats went out daily, invariably returning loaded with meat. It was an unforgettable sight to see the great creatures piled one upon another on a small cake of ice, pushing it several inches below the surface of the water with their weight, continually emitting their peculiar grunting bellow, while other parts of the herd could be seen scattered about on the pack in all directions.

There is no summer fishing here, but several kinds of ducks and geese are plentiful, numbers of them nesting in the vicinity. Ptarmigan can be seen at most seasons of the year, some years in abundance, but during our stay they have been scarce. We also have a ground squirrel, the skin of which is much used for light-weight artiges.

The fall fishing, about 25 miles up the Kuk River, was very successful and each ice cellar contained a generous supply of "ahkaluech," an excellent white-meated fish about a foot long. This summer there has been exceptionally good seal hunting on the ice. Sled loads of meat are brought in daily, and the women are all busy skinning and putting the meat in oil in sealskin pokes to pickle.

Last winter there were fewer foxes caught than in either of the two preceding years, only 140 white and 6 red, but these skins brought in returns equivalent to that obtained from many times their number in past years. As high as $32 was paid locally for a white fox, and goods were sold very reasonably. This was due to the influence of the native cooperative store here.

Cooperative store.—The greatest disadvantages which the native store has had to contend with so far have been its small stock and the fact that we are unable to fill shortages that occur in the stock during the year. There is only one time each year when we can receive supplies from Seattle and perhaps purchase a few from the freight boat.

Very little credit has been given, and that for only short periods. This is another innovation to these Eskimos, who have been in the habit of receiving credit from traders for an almost unlimited length of time, and of being allowed to go hundreds of dollars in debt. At the close of our second year of business there are no "Accounts receivable" on our books, no "Bills payable," and after the furs on hand are sold and the books balanced a good dividend can be paid. The native store has made an excellent beginning, and as all of the natives come to see the benefit which it is to them, and as the stock increases to meet their wants, it will undoubtedly fulfill in every way the purpose for which it was established.

Coal.—Coal can be picked from the faces of banks or dug from the ground in a great number of places in this vicinity, and in the summer and fall washes up on the ocean beach in such quantities that sacks may be filled in a short time. The natives have mined coal for the Bureau of Education for several years. At first they did not take kindly to the work and various means of persuasion were resorted to by the teachers in charge in order to get them to mine. They have finally come to realize what a great benefit it is to them to be able to procure food and clothing so easily at any time, and in the last few years have come to depend upon the fuel supplies for a large share of their groceries and dry goods.

Reindeer.—We feel much encouraged over the improvement shown in the two Wainwright herds and the Icy Cape herd. A large per cent of the deformed deer and inferior stock has been eliminated—these being butchered at the most advantageous season. Every effort has been made to impress upon the reindeer men that herd improvement can be obtained only through selecting the best stock to reserve for breeding purposes, and literally every deer butchered during the past three years has been made a case in point. No fawns have been butchered—a measure we felt it necessary to enforce temporarily, as the herds had been practically stripped of steers and male fawns. Herding grounds have been selected with care, and the herds moved frequently, the herders living in tents during the summer and in snowhouses and igloos built the preceding fall at good feeding grounds during the winter. I have kept continually in touch with affairs at the herds by visits, correspondence, and herders' diaries, and feel sure that most of our reindeer men are above the average in length of time spent with their deer, obedience to the rules, and general honesty and care of the deer under their charge.

Conditions are not as favorable here to the reindeer business as farther south. Most of the fawns are born in May and June. Snowstorms and wet weather, followed by a severe freeze, are common in June, both hard on fawns; and snow begins to fall again in September, which does not give them long to make a start in life. Moss, too, is scarcer. But, despite a large decrease of fawns due to unfavorable weather conditions during two fawning seasons, and an epidemic of dysentery another, there are 1,709 reindeer owned by Wainwright natives at present, as compared with 1,070 in 1915, and the number of natives owning deer has increased from 39 to 58.

The return of the Wainwright delegates from the Noatak fair created an added interest in the reindeer. The men were full of enthusiasm over the fair, with its opportunities for mingling with other reindeer men, for seeing other deer, and for learning improved methods of handling and caring for them. On their return they held a meeting and told the people what they had seen and learned, explained the Reindeer Men's Association, and sang the reindeer songs they had learned at the fair. Notwithstanding the fact that our men must be absent six or seven weeks to make the trip, there have been several each year willing to leave their families and their trapping to attend. There is no doubt but that the fairs are a great benefit to the reindeer men, and will tend to create more interest in the business than any other one thing could. Last Christmas 14 female deer were given as presents, chiefly by parents to their children.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT NOATAK, IN ARCTIC ALASKA.

By James H. Maguire, Teacher.

The United States Government school at Noatak village, on the Noatak River, is located in an air line, 80 miles north of Kotzebue, but on account of the devious course of the lower river through low-lying silt deposits, the distance traveled by water is not less than 110 miles. The village is inland from the Arctic coast probably 60 miles, and the elevation is 400 feet above sea level. The site is admirable, being on a tree-covered glacial bluff 60 feet above mean river flow. There is an abundance of timber for fuel and cabin construction. The soil is rich and apparently adaptable to the cultivation of garden truck. The river teems with salmon and trout. The surrounding country is rich in fur, and the upper reaches of the river are the present range of big herds of caribou. There is no poverty. Hunger is something unknown to the Noatak Eskimo.

This village was founded 10 years ago when the Alaska school service representatives gathered the scattered families of Eskimos from the lower and upper river valleys to this carefully and well-chosen site. The lower-river people were known as Nebaktutmeuts or timber natives (Nebaktut is Eskimo for trees). The upper-river people were called Noatakmeuts or Noatak River people, and they lived in the caribou country far above the big timber, the only woods being willow and small alder. These upper-river people had little or no intercourse with other people, even of their own race, and most of the children had never seen white people until the establishment of the Government school. This gathering together of people from so widely scattered communities was an experiment without any too much promise of success, but that it was a wise move is demonstrated to-day in this well-ordered village of 152 people.

Taken as a body, physically, the Noaktak Eskimos are undoubtedly superior to any native Alaskans we have worked with, and the Noatakmeuts or upper-river people are distinctly a class by themselves. They are large of stature, with enormous chest development, and are exceptionally robust. There is not a case of venereal disease in the community, but, unfortunately, there are seven hopeless cripples. Two of these are recent arrivals from a coast village, four are lower-river people, and one is upper-river and is tubercular. The remaining 145 are exceptional types.

Much comment has been made upon the inaccessibility of Noatak village, the great danger encountered in navigating the river and the desirability of moving the Government plant to some point nearer to Kotzebue on slower running water. Our observation of the transportation feature is as follows: The first 90 miles of the river between Kotzebue and Noatak are easy of navigation for power and even sailing boats. The current is sluggish, the water deep, and the river wide enough for tacking when necessary. But the remaining 20 miles are comparatively hard to travel. The water is very swift and in places shallow, necessitating towing and poling. This unusual and apparently dangerous method of propulsion is disconcerting to the new-coming teacher, but after one or two trips the method is only tedious. The danger is negligible.

After studying this village situation from its every angle we believe the present location is positively the most desirable from the economic standpoint of any site on the entire river. The great question of food is here provided for by the reason that fresh fish in large numbers can be taken every day in the year. the lower river is frozen to a great depth for eight months, making winter fishing impossible. Food supply is paramount; so this is the logical site.

School work.—Classes were organized October 8, 1917, and continued until April 26, 1918, when the annual migration to the sealing grounds completely depopulated the village. During the school term of 123 days the enrollment reached 53 and the attendance averaged 42. There was no truancy, very little tardiness, and 15 pupils recorded perfect attendance.

The following subjects were handled in regular classes: Arithmetic, reading, spelling, writing, drawing, history, geography, and chart and kindergarten work. Special attention was devoted to the use of English and to composition and correspondence. Neatness and cleanliness were insisted upon, both of person and in every department of school work. The results obtained were in many cases suprising. Much time was given to music and our patriotic songs were explained and always sung with vigor. Competitive spelling and mental arithmetic were used as relaxation and were always popular.

Domestic science.—The assistant teacher, Mrs. L. C. Abercrombie, gave housework, sewing, knitting, and cooking extra attention and was enthusiastic for this work. The cooking classes baked: 811 loaves of light yeast bread; 775 light yeast biscuits; 553 baking powder biscuits; and 256 fish cakes.

The sewing classes made 15 pairs of mittens, 15 pairs of wristlets, 18 shirts, 4 dresses, 100 flags, 22 pennant streamer, and 4 reindeer banners. Both boys and girls were keen for knitting and did equally well.

Native homes.—There are but two of the old-style Eskimo innies in Noatak. One is occupied by an aged woman, who still prefers that style of architecture. The other by a newly arrived family from Tigara (Point Hope), who built hurriedly with the only material available. The remaining 32 homes are substantial, hewn-log cabins, well ventilated and lighted. The majority of windows are of sash and glass, although some native windows are still in use. There are no stone lamps or stoves in service. There is no dearth of fuel, as this is a well-timbered country.

Health and sanitation.—The health of the Noatak Eskimos is good. There is no indication of venereal disease or trace of its prevalence at an earlier period. There are two pronounced cases of tuberculosis and one probable. Medical assistance was rendered 1,205 times averaging less than 5 calls a day. Most treatment was for colds, stomach trouble, rheumatism, snow-blindness, cuts, and such minor ailments. A fair percentage of treatment was given in the homes whenever assistance was asked for. Forty-seven teeth were extracted, and 18 permanent fillings were placed. One male child of 2 years died of constitutional weakness and probable maternal neglect. An aged woman died in a tent on the trail to the sealing grounds. One young married woman was accidentally killed by being crushed under a whaleboat while transporting the same to the whaling station at Point Hope. There were 4 births, all normal—1 male and 3 female.

We attribute the freedom from serious sickness to the general use of fresh, clean food; improved living quarters; very little, if any, consumption of tobacco; and a tendency by reason of the trapping activity to much outdoor life. Furthermore, there is no clubhouse or kosga, with its attendant polluted air, filth, and irregularities.

Native support.—As this is a timbered country it is naturally fur-bearing to a marked degree, the trapping range extending to the limits of the timber, and probably more than 200 miles beyond this reservation into the upper reaches of the river.

Fur brought exceptionally high prices during the past winter, the revenue from this source alone ran close to $6,000. The following sales were reported:

57 lynxes, at $10	$570.00
1 wolf	15.00
5 wolverenes, at $30	150.00
13 white foxes, at $23	299.00
190 red foxes, at $18	3,420.00
13 cross foxes, at $35	455.00
1 silver fox	200.00
59 minks, at $5	295.00
275 ermines, at $1.25	343.75
	5,747.75

Sealing will bring returns for oil, and dry salmon will add to the revenue of the village.

A few carcasses of reindeer were sold during the winter, but each year shows a marked decrease in the white population and a necessary limiting of the Kotzebue market's demand for deer meat. This loss of market is permitting the native to use much more deer meat for his own food; consequently he has fewer marketable steers—a situation which, while improving the health of the Eskimo deerman, reduces his stock of steers for market, provided a market be discovered or suddenly established through rehabilitated mining activity. But, as we understand the situation, the reindeer was imported to replace the vanished caribou and to aid in sustaining life in the natve Alaskan, wherefore the Eskimo deer man is now living very well indeed, better than either he or his progenitors ever did before.

Village council.—A reorganization meeting of the Noatak native council was held early in November by the village electorate. Seven men were chosen to conduct and adjust native affairs, differences, and disputes; and again we affirm that a native village without a governing council is not progressive. These men met at stated periods and listened carefully to suggestions, and then did not hesitate to put measures of improvement into operation.

All dogs were chained, even half-grown puppies, which have been known to gnaw sled lashings and otherwise damage property. Worthless, stray, and stunted, inferior sled dogs were destroyed. Old people were urged to make wills to avoid disagreements among their relatives after their deaths. Younger men were sent into the timberland to secure fuel logs for old women and for families whose adult members were on the trapping grounds. After a fire had destroyed one village home, the council made periodic examinations of each and every flue and chimney, with the result that no other fires occurred. We have seen just as efficient councils at other places, and firmly believe they are organizations spelling advancement.

Agriculture.—No attempt has been made heretofore to cultivate the Noatak soil. Last summer we were so impressed with the house gardens at Kotzebue, Noorvik, and Kiana that we have several garden plats set to potatoes, turnips, radishes, and other vegetables, the success of which venture will mean much to Noatak. The soil is apparently as fertile as Noorvik, but slower to warm to depth. It may be that the season is backward this year, but we are willing to make every effort to make potatoes grow on the Noatak.

Migration.—The Noatak Eskimo is not a homesteader or stay at home in any sense of the term. We are familiar with the Eskimo from Barrow to Unalakleet, the islanders and the Siberian native; but the Noatak native is probably the most restless wanderer of them all. Early in April he begins overhauling his sealing gear, boats, spears, nets, etc., and by May 1 he, his family, his dogs, tents, household goods, practically everything he possesses, with the sole exception of his cabin, is sledded along the ancient trail to the sealing grounds. He makes two relay camps en route, and in the course of 10 days or 2 weeks reaches his mecca, the haunt of the Eskimos' best friend, natchuk, the seal. With the breaking of the Arctice ice in June, sealing is finished and the pilgrimage is resumed by easy sailing, beach towing, and camping at will. Any time before July 4th will do for Kortzebue, which is 75 miles from the Noatak sealing camp. The summer spent at Kotzebue, and autumn at hand, the Noataker turns homeward by way of the river, stopping at will to fish, gather berries, and to hunt birds. Eventually he reaches his village and goes into camp on the sandbars at the foot of his village site. There fishing and fish drying are resumed in earnest. His racks are red with salmon sides drying in the fast-shortening days. He remains in his tents until the frost has dried out his rain-soaked cabin, which is repaired, windows replaced, and made comfortable for the winter. Early in December he sets out for his favorite trapping camp ground, and beyond a trip or two back to the village for food, to sell skins, or for the Christmas festival, he spends the most of his winter 100 or 200 miles from home. Sometimes his wife and a child or two are taken along, but in most cases the children are left in the village with neighbors or relations so they can attend school. Trapping finished, the April movement to the sealing ground occurs again in due order. The same grand swing around the circle which has been as regular as the transit of Mercury for centuries past is in operation and will not be stopped; and why should it? One of our predecessors designated the Noatak people " the Arabs of the North." At that time, several years ago, we wondered at the term. Now we understand. We have seen these people at Kotzebue, at Shushaluk hunting the shushuk beluga or whitewhale, at sealing camp, and in the trapping field, as well as in their comfortable village cabins, and we are satisfied that home is any place that an Eskimo of the Noatak River happens to be.

Teachers' travel.—Acting upon instructions from the district superintendent, we made four trips to Kotzebue during the winter to assist the native teacher at that place. We rendered medical assistance as required, carried dental tools, and filled and extracted teeth as necessary both for whites and natives. No charges were made for any of this service to anyone. We were more than pleased to report favorably upon the good work being accomplished by the teacher, Charles Menadelook, whom we have known for many years at Diomede

Island, at Nome, and at his old home and birthplace, Cape Prince of Wales. His Kotzebue school was well ordered, and the attendance exceedingly healthy. We take this opportunity to express our confidence in this young native's natural ability as a teacher, which trait is rare indeed among the Eskimos.

The January trip was made by Mrs. Abercrombie and her husband, both of whom stood the Arctic midwinter travel remarkably well. They were both very much impressed by Menadelook's teaching ability and his methods of working with his own people.

The final trip was made late in May and the route followed was the old trail over the mountains to the Noatak sealing camp, then along the Arctic coast to Kotzebue. On account of the lateness of the season the return trip was made the same way, as rotting ice in the river made that trail hazardous. The native instinct which caused the detour was true to tradition. The river broke the day of our arrival at the village.

Reindeer.—There is a herd of approximately 800 deer attached to this station, and its stock is owned by representatives of every family in the village. During the winter numbers of caribou mingled with this herd, and during the rutting season one mighty bull became very tame, but later on returned to the hills. However, our deermen anticipate an improvement of stock due to the infusion of new blood. This herd has shown some deterioration from inbreeding for some years. During the early winter a small pack of wolves bothered the deer, but did not kill many. Two of the wolves were killed and the rest driven off. We learned that other deer herds were molested by wolves, and some wolves were destroyed. The depredations ceased in the Noatak herd early in December.

In March the annual reindeer fair was held about 8 miles north of this village. Delegations attended from as far north as Wainwright. Government representatives came from Nome, Noorvik, Selawik, Kotzebue, Kivalina, and other visitors from Kiana, Point Hope, Wales, Buckland, and Shishmaref. We believe the reindeer fair is a great get-together factor and should be perpetuated, but a date at least two weeks earlier is recommended.

Religious work.—The Friends Missionary Organization maintains representatives at this village who supervise that branch of endeavor. The mission residence was destroyed by fire October 29.

Recommendations.—In view of the inadequate and worn-out condition of the school plant here we recommend an entirely new series of buildings—sanitary, as modern as possible, and of construction to eliminate fire danger to the minimum. To this end all buildings should be detached. In the present small plant there are six small stoves and five smokestacks. These stacks are constantly choking from the accumulation of creosote, which burns out at intervals, causing a fire menace.

If, however, an entirely new plant is not feasible at this time, we recommend that the Government representatives be provided with a detached log residence, insuring some comfort, a little privacy, and less danger from fire. The present space utilized as residence can be used as a classroom, a bathroom, and a cooking room. The new residence might be considered in the light of a nucleus for a model group of school buildings for this place. Logs are available in any quantity at a very low cost. Doors, windows, flooring, roofing, and finishings only need be imported. A wireless receiving and sending plant is hoped for, and a sawmill, with a 10 to 15 horsepower engine, would go far to completing the station equipment.

Notes.—District Supt. Shields inspected our classes April 5. Although suffering from his recent accident, he did much to stimulate teachers and the village generally. His visit is an epoch. The coldest weather recorded was

49 below zero, March 2. The total eclipse of the moon was visible at all stages December 27. Deepest snow was 2 feet and 4 inches on the level. The ice in the river broke May 28. Great numbers of eastern robins appeared May 9.

In closing we wish to state that we believe the Noatak school children will average higher in deportment and obedience than any other Alaskans we have taught, but their misconception is woefully apparent on account of their isolation and lack of comparative material.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT SELAWIK, IN ARCTIC ALASKA.

By Frank M. Jones, Teacher.

The Eskimos have seemed very proud of their school this year and very loyal in its support. The average attendance for the year has been the largest since the school was started, in spite of the fact that many of the large boys left school and engaged in trapping. When Mrs. Jones and I look at the number of youngsters ready to begin school next year (and the following year) we wonder where can we put them. Nearly all the trappers made arrangements whereby they could leave their families in the village while they were away.

Arithmetic.—The usual number work was done in the primary grade. In the upper grades the multiplication tables, addition, subtraction, and division were carried out as in the preceding year. I had the older children cut the labels off canned goods and mounted on cardboard. Then we would "play store," after the little folks were dismissed. Two boys were storekeepers, and they kept a book account and bought skins and sold goods. The other children cut out miniature mink, weasel, fox, and otter from paper; then took them to the store to sell. The educational toy money sent to every school was used to make change. The children were told to pay for everything they bought and not to ask for credit. The children became so interested that they forgot they were learning arithmetic but they learned it nevertheless. A few of the oldest pupils were given catalogues and shown how to order things from the States. They learned to use the index, write the order, foot it up, include postage, and address the letter. This was done in ink so that they had practice in penmanship as well as in business methods. The comparison of outside prices and Alaska prices was obvious.

Reading.—It is a problem to find suitable reading material for the children. Their reading is likely to become the mere pronouncing of words. Their idea of the outside world is as vague as is the outside child's idea of Alaska. Lessons that they could understand were taken from the different texts; some Bible stories were told, and the *Eskimo* newspaper was used. The whole idea was suitability to the child's conception. The Selawik children read very well, but are backward in talking English. The Friday play hours helped to overcome this.

Geography.—Children of other lands and their country seemed to be most valuable as geographical training. The Eskimo child likes to learn about other children who live differently. From this as a basis, map work and coloring follow. The foods shipped to Alaska, such as the Eskimos use, and their places of preparation were used as subjects. The capitals of countries, the war zone, Alaskan towns, etc., were used for map finding and globe work.

Manual training—The work in manual training included instruction in making furniture and in the tanning of leather. In the fall several of the boys gathered willows with which to make chairs as Christmas presents for their younger brothers and sisters. Mr. Chance gave the boys several lessons in making these small chairs. After Christmas I set them at work making full-sized chairs of willow. The pattern of ordinary chairs was used, and the chairs mortised and glued. Some of the willow split badly. For the next furniture I would recommend birch. It is easily obtained and should make excellent material. It should be cut in the spring or fall and well seasoned before working. During the working period names of the new terms used in making furniture were written on the board and the boys learned to pronounce and spell them. Fourteen chairs were made.

Just before fair time several of the village people donated deer skins to the school, in order that the children might dehair and tan them. The dehairing was done at the children's homes, but the tanning was done at the school. Alder and willow bark was used for tanning material. The leather was softened by working it with the hands and pulling it over a piece of wood. Articles were then made for the Selawik fair exhibit. While the tanning and sewing of the skins was not done as well as older people could have done it, the children still got the experience of working with leather. Proud, indeed, were the boys and girls with the red, white, and blue ribbons which came back from the reindeer fair for their leather work.

Composition work.—Especial stress was put on composition work this year. The older pupils kept diaries for several weeks and wrote everything of interest to them in their books, as well as songs, poems, etc. One period a week was given to current events. I wrote these on the blackboard in the form of an outline, and the pupils filled in the details. However, the best original work done in composition was that which discussed the life and characteristics of the animals with which they were familiar.

Wireless dispatches were included in the current events, after being simplified so that the children could understand them. Sometimes a period was given over to subjects such as railways, steamships, etc., and pictures pasted in the books.

No night school was held this winter, but every Friday night was open house for the children and young folks. On alternate Fridays I gave talks on the following subjects: Body structure, canals of the body and their uses, food and its preparation, the war and why we entered it, submarines, aeroplanes, and geographical talks. These talks were attended by old and young and were interpreted. They were often illustrated by models, charts, and drawings. The purpose of these talks was to give the people information concerning themselves and the outside world. The large attendance was indicative of the interest of the people.

Alternate Fridays were given over as play evenings in the schoolroom. Mr. Chance had charge, and he was helped by his wife, Mrs. Jones, and myself. While games were played the boys and girls were led to use English, and in playing they forgot their bashfulness in using the new language. The children played simple games, such as are commonly played by children in the States.

The school music received its share of attention this year. It is of value in the teaching of English and as memory work. The usual program was given by the children at Christmas.

The articles in the *Eskimo* have appealed greatly to the young people who could read, and they have been of much value. To a people who have just learned the English language this paper is an interesting textbook. To the reindeer men it gives advice and help, to the school children it is a reader, to the teachers an encouragement.

Industrial life and village improvement.—The natives have been well supplied with food and clothing the past winter. Skins were plentiful and prices high. Village pride seems to be growing and showing itself in cleanliness and a "work together" spirit. Lumber for several new floors was put in during the past winter. A few of the men made chairs for their cabins, being encouraged by the boys making furniture in school. The men are clever with tools and can easily make furniture for their cabins. Every cabin has its table, but chairs are sadly lacking.

Several hundred dollars were earned by dog-team freighting last winter. Of course, this is much smaller than the amount earned by the Selawik boats freighting in the summer. Matoolik's launch made considerable money for its owner last summer. As far as I know this is the only power boat owned by a native north of Nome. Selawik Jim Ikik made a new 45-foot schooner last summer. He sent out to Mr. Lopp for the lumber, but used native wood for the ribs and keel. The lumber was well seasoned, and now Jim has an excellent boat, strong and seaworthy. This is the third boat he has built. He has had many offers for it, the best one being $1,200, half cash; but he was wise and refused. He intends putting in an engine. Yokup sold his 48-foot schooner to Kivalina and Point Hope people last summer for $1,200. Like a wise man he took the most of his pay in reindeer. These two men could build up quite a trade making boats, as they build the largest and best boats in this part of the country.

Health and sanitation.—The health in the village has been very good during the past year. There have been no epidemics and but few deaths. Only one child has died, and she was a cripple 4 years old. Four adult deaths have occurred: Three from old age and one from tuberculosis. Twelve births are recorded, all the babies being alive at present. Mrs. Jones gave three talks to the women on obstetrics and nursing. The women discussed these subjects with her. The older women, who act as midwives, were anxious to learn, and especial attention was given them. They are largely responsible for the treatment of confinement cases and can remedy many of the mistakes formerly made by the Eskimos. During my trip to Noatak, Mrs. Jones attended to considerable medical work, twice closing school to attend to serious cases. I gave one talk to boys of adolescent age. The women named a committee on house inspection, washing of floors, and clothes. A weekly inspection was made of the houses. Two large panels of photographs of the village and school children were made, and the cleanest house and igloo, respectively, received the panels. The panels were kept one week and then awarded to another place. This created much rivalry, and at the end of a stated period the panels became the property of the place winning them the most times. We found this plan quite successful, and deciding between cabins was often very difficult. Some of the delegates, upon returning from the fair, said that our village was the cleanest of any they had visited.

Four men and three women constituted the village council elected on October 1. The form used last year was again used, and the officers performed their duties very well. The usual questions and difficulties of an Eskimo village were dealt with by them. When Martin Moran was shot at Shungnak and was rushed through Selawik to the doctor at Candle, it was the village council which secured fresh dogs to speed him on his way.

Acting upon the appeal of the Red Cross at Nome for feathers to send to the war hospitals, the Selawik women collected over 66 pounds to be forwarded.

Over $25 was sent to the relief of a former Selawik teacher whose cabin was burned.

Wireless.—Last summer I sent out for some receiving instruments and in the fall constructed a receiving station. The native men set up two 58-foot aerial poles, and I had the set in working order in November. The Government station at Noorvik, in charge of Delbert Replogle, has been of great assistance to me, sending slowly in order that I might learn the code. Noorvik is 40 miles from Selawik; Nulato, 150 miles; and Nome, 225 miles. All these stations have been heard. Through one message alone the natives saved over $500 by hearing of an increase in the price of furs. I would recommend a small sending and receiving station for Selawik in connection with electric lights. Unless one has been in the Alaska service he can hardly appreciate what a wireless means to an isolated village in the Arctic; one important message may be worth the whole monetary value of a set. Over 60 messages have been received from the station at Noorvik in the past seven months. Six official messages have been received.

Reindeer.—The fawning season was hindered by very cold weather and many fawns died. However, I expect the record of last year to about approximate the one for this year. The reindeer boys watched the herds faithfully during the fawning season. In the fall a large caribou joined Herd No. 1 and this spring the boys report several half-breed fawns. This is a good thing, as the strength of the deer is increased and the effect of inbreeding overcome. Three years ago another caribou ran with the herd, and several fawns were born which are now some of the best deer.

I made the trip to Noatak fair again this year with the Selawik delegates. Noatak is too far for the boys to drive deer and race them, so their efforts were confined to exhibits. Selawik got first and third prizes for the best birch racing sleds and many prizes for harness and leather work. Reindeer sausage was also exhibited for the first time. This affords a good method of putting up reindeer meat so that it will keep indefinitely. The judges pronounced it excellent.

The reindeer men are anxious to move the herds as soon as the new reservation is established, as the herding grounds there are better and the fawning grounds more sheltered.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT WALES, ON BERING STRAIT.

By Arthur Nagozruk, Teacher.

This was the first time that no white teachers and missionaries were sent to this place for 27 years, and all the work was carried on by the native teachers during the year.

School.—The school term began October 22, 1917, with an enrollment of 57, which gradually increased to 73 during the month. The term ended May 31, 1918. Days school were held, 141; total enrollment, 90; average attendance, 70.

School work.—The school was opened when our people came back from different places. Since there was no assistant at the time, I divided the classes into two divisions; the advanced classes in the morning session and primary classes in the afternoon. All the children wanted to come to school at both sessions, especially the larger children; so I talked about this to the larger boys in school, that if they would only help me a little in the primary classes, they could come in both sessions. Several boys promised that they would help me until the assistant is appointed. On November mail we heard that Antoine Ereheruk was appointed as my assistant, but he was absent from the village for three months. In the meantime Charlie Kiomea and another boy had helped me. Charlie Kiomea was appointed as assistant teacher later and did good work.

In general, school work, reading, writing, arithmetic, history, spelling, drawing, composition, and language were taught. All the pupils in advanced classes were taught arithmetic work individually. Each pupil works and gets as much as possible, without waiting for others. This individual work has proved to be much help for each pupil. The arithmetics were taken home on Friday afternoon and brought back to school on Monday. All the smaller children in primary classes did finely in all the work.

Attendance.—The school was well attended all through the term, and there was very little tardiness. Seven pupils in the advanced and 10 in the primary classes came to school every school day during the school term. This had never happened during my continuous work for 9 years in this school. The smaller children came regularly, unless stormy weather prevented them. Often their parents, brothers, and sisters in school brought them on stormy days.

School Republic.—The School Republic was started as usual at the opening of the school. The care of the school room and halls were in the hands of the officers, who were elected by the pupils. One officer writes the names of the sweepers on the blackboard every day, and other officers see that the coal hods are filled and kindling ready for the next morning. Every pupil takes care of his desk and sees that it is clean and that his books are in proper condition, as a citizen in a city keeps his home in good condition, and everything that belongs to him. The School Republic has proved to be a great help to the teachers in every way, as well as to the pupils.

Domestic science.—This branch of school work was under the supervision of Mrs. Nagozruk, who for two years did the same work at Shishmaref, although she was not appointed for this work. She was very much interested in this school, as well as I, in order to help our people in every way we can. The following were made during the term: Twelve aprons, 15 dozen plain handkerchiefs, 16 pairs knitted and crocheted wristlets, 9 pairs knitted and crocheted gloves, 18 pairs knitted and crocheted mittens, 3 crocheted hoods, 1 crocheted cap, 6 pairs crocheted bootees, 2 pairs knitted child's stockings, 16 baby's dresses, 4 women's dresses, 1 boy's shirt, and 20 crash towels. Some of the above work was sent to the Igloo and Noatak fairs and got prizes. Also 390 doughnuts and 1,660 biscuits were baked during the term, and the cooking was carried on all along the winter. More work would have been done in sewing and cooking if Mrs. Nagozruk had not been sick for some time. This branch of work was carried on daily in May and the first part of June to make up for the time lost in the winter. The sewing class consists of 15 girls, from 9 to 16 years old, and they are doing a fine work. At Thanksgiving Day we had a joyous dinner. Some of our young men contributed flour, sugar, tea, and deer meat for the Thanksgiving dinner. The cooking class was busy for two days, and baked biscuits and doughnuts. Before Christmas the sewing class made handkerchiefs for every child in the village.

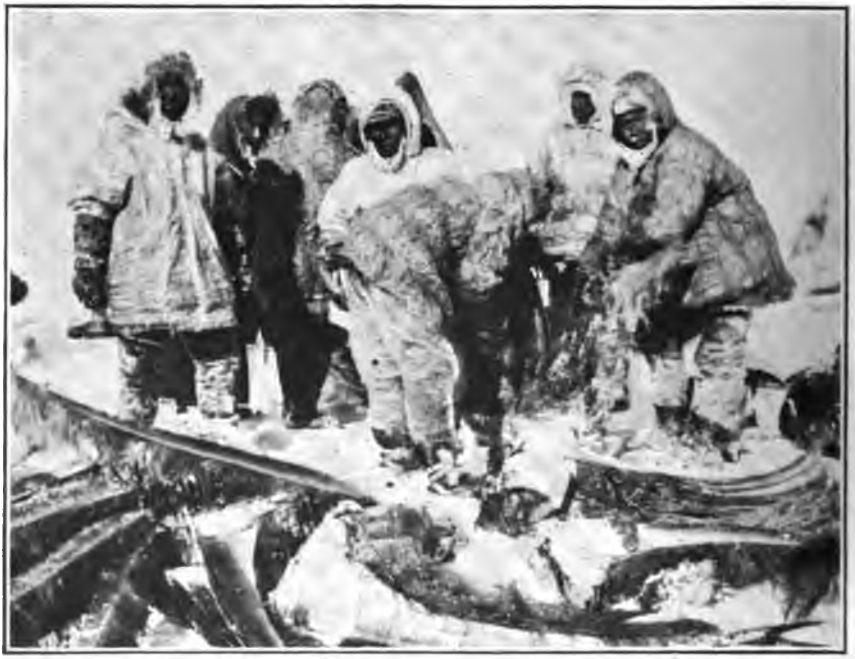
An entertainment was given by the school at Christmas. The parents take a great pride in the ability of their children to speak in public, although some may not understand a word spoken. Even children 5 years old had verses to say which they learned in school, and that greatly encouraged their parents to send them to school.

A. SUPERINTENDENT OF NORTHWESTERN DISTRICT AND DRIVERS.

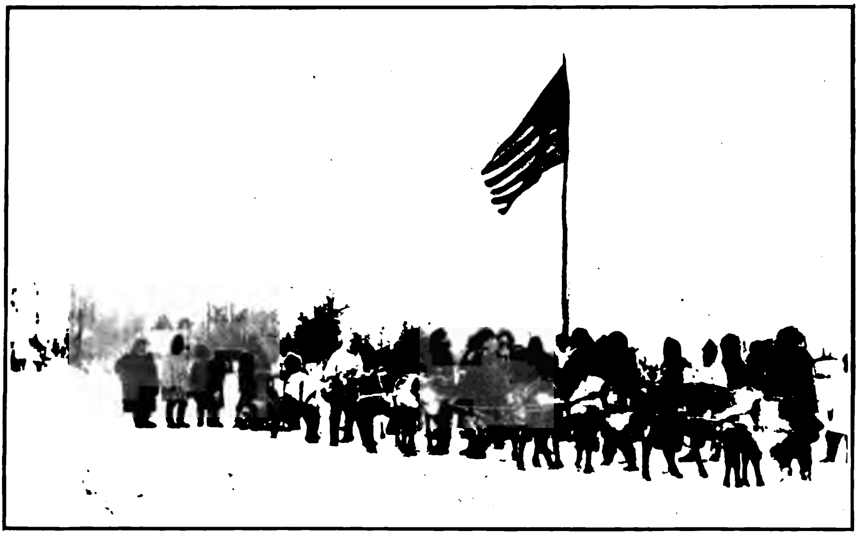
B. FIRST GRADUATES, METLAKATLA SCHOOL.

One is a nurse in training at Juneau; the other is a student in the Seattle High School.

A. ESKIMOS AT CAPE PRINCE OF WALES STARTING ON A WHALE HUNT.



B. CUTTING UP A WHALE.



A. THE CAPE PRINCE OF WALES DELEGATION AT THE IGLOO REINDEER FAIR.

B. SUMMER FISHING SCENE, SOUTHEASTERN ALASKA.

A. PART OF THE WORKSHOP, SELAWIK SCHOOL, ARCTIC ALASKA.

B. FIVE OF THE LEADING OWNERS OF REINDEER IN NORTHWESTERN ALASKA.

Shop work.—No carpenter work was done in school, owing to the lack of materials to work with. Of course, some repairing was done in the shop and school building before school began. The shop was a great help to the people, as well as to the school. When the people came back from summer fishing and trading many stoves and stove pipes were made out of sheet iron. The sheet iron was brought from Nome and Teller and made into stoves here, which saved a little money. Sleds and boats were made and repaired, also many things which they could not make in their homes were made in shop. A new forge is needed in order to be of more help in making stoves, and many other things which they could make themselves instead of buying them.

Health.—The general health of the village has been especially good. There were 7 deaths and 15 births; 3 children died and 3 women. One man was smothered to death under a bank of snow by a mountain slide on March 14, and his body was found on July 16. Our baby died in December, just before Christmas.

All the houses and inns in the village were measured in cubic feet, to find the number of cubic feet for each person to breathe. The number of persons in each house or inn, the windows, the skylights, and the ventilators were counted. Only two inns were found without ventilators. Persons who have tuberculosis of the lungs were examined, and the persons who are liable to have it, by the request of Supt. Shields. There were about 40 or more consumptives, and many of them have been affected once and have been cured. After the report was made out the town council called a special meeting for all the people in the village and ordered all who are affected with tuberculosis of the lungs not to take any active part in native dances of any kind, or visit the dances if they are affected seriously. Also they were ordered to go and see the teacher for instructions how they would take care of themselves. The instructions in "How to Keep Well" were explained to them, and sputum cups were furnished, with full instructions how they should dispose of them. They were further instructed to be very careful about their children who were in school; towels and soap were furnished to school children who have homes affected with such disease, so that they could keep their hands, faces, and their clothes clean.

Town council.—The council has held its monthly meetings regularly throughout the year and they were well attended; many special meetings were called. The council work has proved to be a great help to the people as well as to the Government. The local petty troubles and differences were settled with fairness and satisfaction. The early marriage of the young people was discontinued by order of the council, and it has started marriage according to the Territorial law. Several marriage licenses in proper form were secured from the United States commissioner at Teller for young people of proper age and older people. According to the old custom of Eskimos, often girls, even young men, were forced to marry the one they did not love, which caused much family trouble. The council has ordered that no such thing will be allowed in the village any more, and that any couple who wish to get married should obtain a proper marriage license first.

Another thing taken up by the council was that when a man died his brothers and relatives usually took nearly all his property and left almost nothing for his wife and children. This was a very old custom, which has not been practiced that I know of for the last 10 years, but it may happen sometime; so council ordered that no such thing will be allowed. Everything that a man owns should be given to his wife and children.

Dances were regulated and a fixed time was allowed. As it was, dances were sometimes very late and school children were tardy; therefore the council ordered that all school children should not be allowed in such dances later than 9 o'clock in the evenings; and they plan not to allow them at all the coming school year.

The annual village cleaning has been done; each able-bodied male adult has contributed two days' labor or paid $2 to the village fund. The water supply has been kept opened by order of the council all winter by those who were absent at the time of village cleaning last year.

Sanitation.—Care has at all times been exercised in looking after the cleanliness of all the school children who came to school. The children came to school with clean faces, hands, ears, necks, and with the hair combed. The health officers of the School Republic inspected the children at the opening of school every morning, and if a child was found with dirty hands, face, ears, and neck it was sent home to clean up.

The sanitary condition of the village has much improved in every way. Soap was used in washing clothes of all the people. Everything liable to decay was buried and all ponds of water drained. The water supply has been kept in sanitary condition.

Reindeer.—I left here November 13 for the herds, to attend to the annual counting and separating the deer, and arrived at the corral on the 14th. Four herds came near the corral the following day, and the herds were kept separate. The counting and separating was done in a week. In the evenings meetings were held, discussing the reindeer matters, and disputes were settled. I came back to the village November 23 and made the reindeer reports.

A full delegation was sent to the Igloo fair from this station, but I could not go with them as my wife was not well at the time. The boys came from the fair with full satisfaction. Mr. Arthur Shields visited us in April and stayed with us nearly a week. While he was here we had a reindeer meeting, discussing the Reindeer Men's Association, which was organized at the fair and the local clubs which are to be organized at each station. On the first part of May the rules and regulations were sent, and on May 10 they were explained to the reindeer men and owners who were invited to the meeting. The election was held at the same meeting for the officers of the local reindeer club. The membership increased at the next meeting, several owners joining the club.

Native support.—Hunting for seals and walrus and fishing are the principal means of support. Seal hunting was successful all through the winter, and about 24 polar bears were killed. One whale was bombed and killed, but on account of a sudden change of wind the ice drifted before they could cut it up and only the fluke was secured. The walrus catch was far shorter than usual and the long-continued stormy weather prevented the spring hunting. Less than 40 walrus were secured. The necessary amount of meat has not been stored away for the winter in the village. The fur trapping was fair, but no complete record of number and income was reported. The reindeer furnished clothing and food; the surplus skins were sold. The sale of deer meat was smaller than usual; 167 white foxes, 60 red foxes, 2 cross foxes, 2 minks, and 10 lynxes sold for $4,630. No report of fur catch was received from one herd. I am sure that the boys in five herds must have earned by trapping alone more than $5,000.

Mission.—No missionary has taken charge of the mission work. Fuel and light has been sent in for the church. Seven of the members were elected as the church committee and took charge of the janitor work and selected the leaders for the meetings. Two services were held every week and well attended.

Village improvements.—Last year the Wales Cooperative Store was started with a small stock. Former stores failed because they were not managed right. Many meetings were held in order to explain the main object of starting a store as follows: First, there has always been shortage of flour, sugar, and other articles of food. Second, much time has been lost by going to Teller, Nome, and other places to buy a sack of flour, sugar, or other articles; often from 7 to 10 days of good hunting. The time would have been saved for hunting if such food could be bought from the local store. Third, the store would be a great help for the village as well as to the stockholders by handling furs, sealskins, mukluks, and everything that the store can sell for cash.

The old mission building was repaired at the expense of the store. The building was raised and a new foundation built; new roofing paper put on one side, windows repaired; outside was painted and the signs were printed in front; a partition was put inside and painted. One side was used as a storeroom for the mission. Also a counter and shelves were made. The store has been successful for the first year. We should now have a cold-storage plant.

Many improvements of homes would have been made if building materials were obtainable. Some of our young men have earned enough to build better homes, but with the high cost of lumber and freight it is impossible for them to get the materials. Wood is hard to get here at the present time and to get a sled of wood is a day's work, from 6 to 10 miles, which does not last a week for fuel. Often for several days, even for a week, it is too storming to go to get wood.

King Island.—Last February 13 of our men drifted off on the ice and got to land at King Island. Eleven of them walked back from the island and two were left there, who were not feeling well and could not keep up with the others. The 11 men walked about more than 50 miles in a day and night; the ice was rough and the snow was soft and deep all the way. Nearly all the men have families and while they were away some of their families were short of food and were cared for from the school's destitution supplies until they came back.

In about the middle of June 17 men from King Island were drifted here by the storm. They were hunting walrus out from the island, and the fog came before they went back. They missed the island on the way back. There were 6 kyacks and 11 men in an oomiak. They tried to locate the island for two days and nights, and they had to come over to this side on the ice with their kyacks and oomiak. Many of the men visited our schoolhouse during their stay here about two weeks and saw our schoolroom, desks, books, and other things that we used for the education of the children. They strongly wish that a school be established on the island, as their children are growing up uneducated. Several of them came over to the schoolhouse and made many inquiries. They know their people well, and they told me that on King Island there are 34 men, 32 women, and 57 children; total, 123. Out of 57 children about 40 were of school age, 17 under school age, and some of them will be old enough to come to school in a year or two. Two of our men stayed there for nearly four months and reported that the people there have kept the days of the weeks and months right during their stay, also they have held meetings every Sunday. But the only question is about the location of the building. As to the water, they said that there is a stream or spring near by, where they get water which is open until December or January. They said that if a tank or box were set in, it would keep open much longer.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT PORT MOLLER, ON THE ALASKA PENINSULA.

By Walter G. Culver, Teacher.

This spring sees the close of the second term of school at this station. Reviewing this year's school work we note with satisfaction that the children have made better progress along all lines than in the year previous.

This place is an ideal location for a large native village. The excellent supply of salmon, seal, game birds, caribou, and other native foods, also the large demand for native labor at the canneries during canning season, combine to make this locality a more desirable home for them than the cities of the north, where the influence of the whites is not for their betterment.

The past year's income from labor, fishing, sewing, and trapping amounted to an average of about $275 to a family. One large, new, four-room frame house was built this year. At present all houses are frame and above ground. Both men and women are industrious. All natives with the exception of one blind man and his little adopted girls are self-supporting. While those men trapping near the village did not have large catches, those who trapped up Nelson River did real well, catching as many as 38 or 40 red foxes. A trader, coming from Nome by dog team, paid as high as $20 for their skins. The men are slowly getting clear of debt with the local trader, who, by keeping them under obligations to him, has been forcing them to sell their furs to him at his own price. Since coming to this locality I have constantly advised them to get out of debt in order that they may dispose of their furs to people who will pay them more money. This year I am taking the catches of two men to the Seattle office to be sold. As these natives know I am not returning to this station it shows that I have won their confidence, as the money from the sale will be returned to them through other channels. Another thing I have been trying to interest these people in is a cooperative store, and a third thing is their salting salmon for the market. Last fall a few of the younger men put their money together, and believing that the price of provisions was bound to rise, bought up nearly $100 worth, afterward selling same at a slight raise in price and realizing about $17 profit. This little experiment worked out so well that they are anxious to start a store of their own. They are also anxious to salt salmon for the market.

Sanitation and hygiene.—The condition of both village and people is very good. As all houses are frame, they are much drier and more easily kept clean. Although we have had to send children home a number of times because of dirty clothing, their general appearance has been very good. I have made it a point to visit each house often, and as the women do not like to have the teacher sit down in a dirty house, they have made special efforts to keep them clean and neat. They have also been encouraged to visit the school room and teacher's dwelling. Mrs. Culver and I have tried to set them a good example on the care of their houses both inside and out. Last fall a number of holes were dug, and during the winter the garbage was thrown into them. This subject has been taught in the school room and at the village gatherings. I gave each child a toothbrush, and brushing of the teeth was made a part of the daily program. Both young and old thoroughly understand the different ways in which disease is spread. All houses have an opening for ventilation.

Medical aid.—There was not the sickness in this locality that there was last year. Medical attention was given 203 times. An epidemic of itch broke out, but yielded readily to proper treatment. There were three deaths and four births this last year.

Manual training.—The class in manual training was composed of four boys. This class was one of the most important of all. Only practical instruction was given. Each boy was allowed to choose what he wished to make, and after selection was made I saw to it that the tools employed were used in the proper way. The principle employed in the teaching of this class was for each pupil to learn the correct use of the different tools. In this way, when they wish to make any particular thing, they are able to go ahead and do it. Each was taught to solder. Sleds, skiis, boats, kiaks, stoves, box traps, kites, bows, and arrows were made. Two boys made little power boats. This was done by making a toy boat and by taking an old alarm clock and soldering on a shaft and propeller for motor power. Great interest was taken in this class at all times, to the extent that they worked ofttimes on Saturday of their own accord.

Sewing.—Forty articles were made in the sewing class, including handkerchiefs, underskirts, with waists, bloomers, towels, work aprons, fancy aprons, holders (for use around the stove), caps for wear in the cooking class, fancy aprons, and a small pieced quilt. Two pairs of yarn mittens were crocheted and one wool cap. Six towels were made for school use. The girls did very well in sewing, considering their ages. They learned to do very nice feather stitching, and this was used much as trimming for the other garments made. They also did darning and patching.

Cooking.—Much interest was taken in the cooking class. Bread, biscuits, steamed oatmeal, fried oatmeal, dried fruits, beans, rice, pie, and eggless cake, as well as tea and coffee, were made. The children often get cake and pies in the summer time at the canneries and wanted very much to learn how to make them. In their own homes they use little butter, and no fresh or canned eggs in winter, so recipes were made up that contained no eggs, in order that they might be able to make these things at home. They succeeded very well. Cook books were made containing the recipes they learned to use.

Reading.—Reading has been taught slowly and thoroughly. Eskimo children learn to read very quickly, but a teacher has to be careful or the pupils will not learn the meaning of the words and sentences they study. I have found that by translating English to Eskimo and Eskimo to English is the most effective way of teaching this study.

Spelling.—No textbook was used. Each lesson was made a spelling lesson. The old-fashioned "spelling-down" matches were very much enjoyed by the pupils and had the desired effect.

Arithmetic.—This subject seems to be a stumbling block to the native children for the first year or so, but patience and tact on the teacher's part in order to keep the children from becoming discouraged will eventually overcome the difficulty. Once the fundamentals are grasped, they make good progress. The only advanced pupil finished division and multiplication to 9, also practical problems in addition and subtraction. The toy money sent with our supplies was very helpful and practical in teaching this subject.

Writing, drawing and painting.—These three subjects come naturally easy to the native children. Although their first efforts are very crude, their perseverance in this line of work makes them quite efficient. They are quick to copy anything they see. The work along this line compares favorably with the average white child.

Geography.—The Eskimos composing this village have migrated from all parts of the north, and therefore the children are interested in studying and locating the different places their parents came from. Much interest is taken in the

World War, and they never tire of studying the different maps of Europe showing the seat of the great conflict. Many excellent maps of Alaska, North America, and Europe have been drawn.

History.—Owing to the fact that there was only one advanced pupil, this subject received less attention. The history of Alaska and the United States was taught, and maps of Alaska, North America, and Europe were drawn.

English talking.—The English language only was used in and around the schoolhouse except for explanation purposes. The children all became very efficient; in fact, during the last two months of school I did not know of one word of Eskimo being used except at my request. This result was largely due to a contest I started among the children. In this contest the pupil using the least Eskimo in and around the school was to receive 50 cents; the second least, 25 cents; and the third least, 15 cents. These rewards were given at the end of the term. Each time a child used Eskimo one point was marked against him. It is a strange fact that the pupil who was dullest in her studies received the first prize. It was no uncommon thing to hear the children using English in their playing after school and on Saturdays and Sundays. Although the contest is closed and the rewards given, the spirit of the contest still lives and they are trying to pick up new words which they hear, as well as using the ones they have learned.

School Republic.—Although this was the first year of the School Republic, the rule of the children in the classroom was a success from the beginning. The officers consisted of a president, vice president, secretary, and policeman. The president was also judge, and the policeman, truant officer. The morning opening exercises were presided over by the president. Election of officers was held every month, in order that all might have the experience of holding office. This method of governing the classroom is by far the best of any I have ever known. The making and executing of their own laws taught them the why and wherefore of the democratic form of government. When any of the school laws were broken, the defendant was arrested by the policeman, brought before the judge, witnesses were called, and the case was tried. Punishment for minor offenses was usually standing in the corner. In no case was authority taken advantage of, and all business was attended to with seriousness. In only one case was the ruling of the court disobeyed, and the offending pupil was suspended until such time as she was willing to cooperate with the student body. The pupil truant officer was the solution of the problem of tardiness and delinquency.

Red Cross.—As a result of an explanation of the Red Cross work by Supt. Miller, our village paid into the Red Cross fund the sum of $27. Many natives had not returned from their winter trapping grounds, or doubtless the amount would have been much larger. The remark of one native showed the appreciation we have been striving to make them feel; it was: "Government help us. He send school teacher. We want help Government fighting man if he sick."

Work with adults.—A special effort has been made to understand the thoughts and ways of these people. Four hundred and thirty-eight visits were made to homes.

After the schooner *Eunice* brought the Government freight last fall (Oct. 3, 1917), a combined carpenter shop, storehouse, and coal house 20 by 24 feet was built. The carpenter shop was open at all times except Sundays and during the manual training periods to the adults of the village. This opportunity was taken advantage of by all, and much work was done on ivory carving, sleds, stoves, kiaks, etc.

Village gatherings.—Exercises appropriate to the occasion were held in the schoolroom Christmas eve by the children. Adults and children alike enjoyed the Christmas tree, the Santa Claus, and the program very much.

Village gatherings were held in the schoolroom once a week. At these gatherings I gave talks regarding the leading of better lives, the progress of the war, the duty of each person to his country, conservation of food, native industries, sanitation and hygiene, principles of citizenship, science and invention, and other topics helpful and interesting to the natives.

I am sorry to report that the natives this year revived their old-time dances. When I first heard of their plans for these I did my very best to discourage the old expensive custom which they have done without for so many years. My efforts met with hostility, and some of the natives became really angry. I say "expensive" because at these dances a native must give away anything and everything he owns, if it is requested of him. For weeks before these dances were held the natives gathered together every night to practice their songs and dances, thus losing much valuable time from their trap lines and keeping the children up until the small hours of the morning, leaving them unfit for school work. For weeks before the big dances took place, the children could think and talk of nothing but *dance*.

Agriculture.—At my request both seeds and plants were sent from the Alaska Agricultural Experiment Station, at Sitka, and by my father in Oregon. The plants, with the exception of one Himalaya blackberry plant, died in transit. The garden we planted was a failure because of the cold, wet summer.

Observance of law.—We still have the problem of liquor getting into the hands of our natives. One white trader in this locality, in spite of the new prohibition law, distributes liquor for trade purposes. On Thanksgiving Day one native became intoxicated, and had it not been for the quick work of the chief herder, sent here to take charge of the expected reindeer herd, a murder would have been committed. It seems to me that it is time that an efficient officer was sent here to stop the distribution of liquor in this locality.

It has been reported to me from a number of sources which I hold to be reliable that both natives and whites are slaughtering caribou by the dozens, in the fall, for the purpose of bait for trapping. Also that certain parties on the Pacific side in Balboa Bay are killing caribou by the boat load and selling the carcasses at Sand Point and Unga. This wanton destruction of meat will, in a short time, put an end to the supply of meat here, which is so important to the natives.

Doing their bit.—Because of scarcity of dog feed, the natives this spring have been feeding their dogs on flour. When the shortage of flour, as well as other foodstuffs, was explained to them, they agreed that only the heads of families should keep a dog team. The single men and boys gave their best dogs to the married men, and all the old and lazy dogs were killed. Up to March 30 more than 20 dogs were killed. This shows that these people are willing to do their duty as they have it explained to them.

In reviewing our work of the last three years, Mrs. Culver and I can see a great change in the appearance of the village and people. We can also see much improvement in the habits, morals, health, sanitary and hygienic conditions of both old and young. It must be remembered that the process of raising these people from their old habits and customs is a slow one, and any improvement, especially among the older people, is very encouraging. The hope of the future rests with the younger generation.

It is not without regret that we are leaving this field of work, and we hope that through our efforts we have been able to establish a good foundation.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT KAKE, IN SOUTHEASTERN ALASKA.

By CHARLES E. SYDNOR, Teacher.

Kake is a prosperous looking village. The first impression one receives on landing here is the town's tidiness. The houses are plain, but clean, there are no "ramshackle huts," and "lean-tos," only substantial homes. Out in the bay, lying at anchor, are the natives' boats, varying in size from the small 18-foot trolling launches to the large 50-foot seining boats. Drawn up on the beach are numerous rowboats, skiffs, and native canoes. These canoes are still liked and used, for they are light and swift. They are made by hollowing out a tree, then springing its sides out to shape. In the old days they made them large enough to hold as many as 50 warriors.

Taking a walk along the boardwalk that runs the length of the town one will meet well-dressed men and women, dressed the same as you or I. Some of the older people still cling to the old customs of dress and habits, but the younger generation is fast growing away from the tribal traditions and conforming to the new conditions in which they find themselves.

The village has a population of more than 300, but has an average of about 200 for the five months October to February. By the 1st of June the town is deserted, and remains so until the last of August, when a few of the old people return; the younger ones do not get back until October.

The occupations vary; trolling for king salmon begins in May, and at that time gardens are planted. The town is so situated that there is not much tillable land around the houses; so most of the gardens are planted along the shores of Rocky Pass. Each family has its plat of ground and uses it year after year.

The 1st of July starts the seining; at this time one will hear of nothing but fish. They dream fish, they think fish, they see fish, and the best of all, they catch fish by the thousands. Most of the men work on the boats, a few in the cannery. The women work in the cannery for the most part, but a few hand-troll while the men seine. The women who work at the cannery make from $100 to $300 for the summer's work. The men make from $300 to $1,500.

Usually the work in the canneries is finished by the last of August, and the natives spend the first part of September in putting up their own supply of smoked fish. The last few years there have been a number who have "mild cured" salmon for their own use, but as a rule they prefer the old time smoked salmon. They string this smoked salmon and have it hanging on the rafters of their homes. Every day or so in winter the housewife gets down several pieces and carries them down to the beach. Their favorite place is on a large reef just off from the schoolhouse. When the tide is out they find a little hollow in the rocks and put the fish in it, then pile stones on top. A day or two later they come down and uncover their fish; the ocean water has given it just the right amount of salt and soaked it up nicely. After the winter supply of fish has been stored away, they gather their garden truck, mostly potatoes and rutabagas, a few carrots, turnips, and onions. By this time it is the first of October and the people are beginning to return to the village. Years ago a missionary here started the idea that they should clean up around their houses before the snow fell—a custom which has been continued, though he left here many years ago. From the middle of October to the middle of November, building and repairing houses occupy their time. This year new houses were built. The teacher sent for a number of plans of two and three room houses, and showed them with good result. In place of the square barn-like house, a more modern structure appeared, much to the gratification of the owners, as they say "it look like picture." Early in the fall the natives got together and ordered lumber from Juneau. It totaled $2,000 for lumber alone; windows, doors, etc., were extra. Of all the new houses built, not one was a tribal affair.

By the 1st of October school was well underway. Games were introduced, such as hand-ball, shinny, jump-for-down, new games of marbles, beckons wanted, run-sheep-run, and many other games that boys in the States commonly play. Football made a big hit; the teacher coached the school team and a former Chemawa man coached the town team. Two games were played, the school winning the first game, 14–0. The town team, composed of men, did not take their defeat any too gracefully, and as a result, the marshal refereed the second fray. The men outweighed the boys, and it told in the last quarter, when they finally got a touchdown. The schoolboys depended on trick plays and forward passes, while the town team attempted nothing but line plunges, except for a few disastrous forward passes. The game ended with the teacher laid out, and the score standing 7–0 in favor of the town team. The native has yet to learn to be a sportsman, also the value of "team play." Not alone in athletics, but in all matters; they are too independent, and until they learn to act as a unit their progress will be slow. The teacher is using every available means to bring about cooperation in all their affairs, and considers games the quickest and surest means of bringing this truth to the younger generation.

With the interest in games, came a greater registration enrollment, the greatest registration that this school has ever had—a total of 115. There were not enough seats to go round, so old benches were used; when these gave out, night school was started for the older ones. But night school was not the solution to the problem, as they are just like other children, they do not wish to come at night. What is needed is another room, more seats, and another teacher.

Geography, arithmetic, and reading were the most popular subjects. Spelling came out with a bound when the method of allowing the children to correct each other's work was started. Before this it had been a drudgery. After the novelty of this had worn off the system of prizes was instituted. The district superintendent had sent down some Perry pictures to be given away. In place of just giving them away the teacher required that the student get 100 per cent for three consecutive days in spelling, and then a small picture was given him. For one week's correct spelling a large picture was given. Never were papers more zealously corrected. Undotted i's, uncrossed t's, and dots missing after abbreviations constituted irretrievable mistakes, while scrawly letters that might be taken for almost anything were utterly hopeless. The year ended with only a very few who did not possess at least one small picture, while others had quite a gallery of them.

The teacher's efforts this year were chiefly to inculcate into the minds of the children that school and studying were to be pleasures and not drudgeries; that happiness, goodness, and fun were all to be found in school work if they choose to look for it. Geography was made a game, one of the children being the teacher, and so expert did the older ones become in this that the teacher was able to conduct another recitation, while the third and fourth grades had their geography.

Arithmetic seems to have a kind of fascination for them; they look upon it as something of a trick, especially so, with division. The native method of dividing was to give one dollar or one fish, or whatever had to be divided, at a time to the number who were to receive. This was long and tedious; to divide the number of dollars by the number of men and get the correct amount in a very few minutes was wonderful, too wonderful to believe until they proved it in their native fashion.

An organ was sent this year, and every morning for 20 minutes we had singing. The reason for having it first was that it brought all the children to school in time, as they did not wish to miss any of the music. "Long, Long Ago" and "Old Black Joe" vied with each other in popularity, and had to be sung each morning. The lighter and faster pieces, such as "Dixie," were liked by a few, but most of them preferred the slower and rather melancholy type of song.

Thanksgiving Day is a regular town reunion. Families who have been out all summer and part of the fall return in time for the day. The women busy themselves in the morning cooking and the men in preparing the tables in the church or Salvation Army hall. Everyone is invited who happens to be in town. A special table is set for the white people, at which knives, forks, and spoons are provided; the others are supposed to bring their own. This they do, and after the meal is done they fill the flour sacks which they have brought with the fragments of the meal. It was about this time that Mr. Hoover's appeal to save food reached us, with Food Administration cards. After a canvass of the village and explaining the purpose of these cards, there was not a home which did not agree to the conditions, and it was a little amusing in some cases to see a Food Administration card next to a totam in the window of the same house.

The day before Thanksgiving snow fell, and it was not until the last day of April that we saw the ground again. It is during this period that the natives have their parties and get-together meetings; the rest of the year they are scattered.

Natives do things by seasons; they eat clams at only certain times of the year; they attend church during the winter, give parties in certain months, and so on. Music seems to appeal to them in winter, and they have maintained a brass band for years. This winter an orchestra was started, which was very creditable. The teacher started a men's glee club; some of the natives have very good voices.

At Christmas the town decided to have a tree, as usual. Heretofore there has always been some feeling that someone was "left out"; so this year, to avoid that, the teacher took a careful census of every man, woman, and child in the village. A meeting was held in one of the houses; it was dragging and evidently only the usual $75 or $80 was going to be raised. So the teacher decided to stir things up, which he did by a vigorous speech and as large a contribution as he could afford. As soon as the interpreter made them understand what the teacher had said they responded splendidly, and in a few minutes we had piled on the table $354. Previously $97 was the high-water mark, of which $40 was given by the whites. We had a great Christmas; the tree was brought into town on the shoulders of the young fellows, followed by the band, with the rest of the town forming a procession and taking it to church. Then it was put up, the tree decorated, and loaded with presents. The committee bought chiefly useful presents, such as shirts, ties, handkerchiefs, socks, stockings, dress goods, and a few toys, apples, nuts, oranges, and candles. We have no destitute in the village, but there are a few who find it hard to make ends meet, and these were especially remembered with presents. Everyone agreed it was the best Christmas they had ever had. No ill feeling was to be seen anywhere, and it was truly, "Peace on earth and good will to men" in our little town.

Very few of the natives went out to trap this winter, as they had done well at fishing the previous summer. But the last of February found a number of them going out to get piles. Over $10,000 in piles was contracted for by the Kake natives. This meant a great deal to them, as it meant new engines and better boats and new boats. There are but very few families who do not have a power boat of some kind, ranging in value from $100 to $3,000.

There are several men who are exceedingly skillful in building boats. One of them, Edmund Ketchtiyet, who had ordered lumber from Seattle to build a 50-foot boat, found that he could only get a little of what he wanted. No material for the ribs or bow or stern was sent. He shouldered his axe and went into the woods, and at nightfall he had found a tree with the proper curve for the bow and two for the stern. For ribs he chose some good yellow cedar and split it by hand. Few white men would have had the patience to do what that Indian did.

It was in the last part of February that the teacher took charge of the Red Cross work. Up to this time there were only 16 members, and of these only one or two were natives. As the people were leaving rapidly, something had to be done, and so a mass meeting was held with a patriotic program. An effort was made to make the natives understand just what the Red Cross is endeavoring to do. On the third night following this a meeting was held at the schoolhouse, $135 was raised and 50 new members were added. Enough interest was aroused by this time so that another meeting was called a little later and an organization perfected as an auxiliary to the Juneau chapter. Yarn was sent for and knitting classes started, with the result that many pairs of socks have already been sent to Juneau. We were a bit handicapped in getting money, as the women had just taken in $320 at a basket social, which they are going to spend for civic improvements, but they gave $25 of it to the Red Cross. The younger men also sent $11.50 for a baseball fund to the boys at the front.

Late in December the teacher invited the town council to supper at the schoolhouse. It was the first time in the history of the town that its representatives had ever eaten at the Government teacher's table. It was only after six dozen biscuits, gallons of soup, and other edibles had been consumed that they lost their formality and a very pleasant evening was spent with the 12 council members. Village improvements and the natives' welfare were discussed and games were played.

Several years ago a few of the men started a store, but it was not under the supervision of the teacher, and as it had no regular storekeeper it soon fell behind. At the beginning of this year the teacher got these men together and suggested that they straighten up the business. The books were gone over and accounts cleaned up, and the collections made seemed quite encouraging. Then an inventory was taken, more stock was sold, and the store continued its business. At a stockholder's meeting held the last of February a 3 per cent dividend was declared. This shows that with a very little help they can make a very creditable showing in business.

During the winter when the weather was so bad that it was impossible to do anything but stay indoors, the young fellows began to hang around a poolroom that was opened this year, and many of them began to use tobacco and gamble. The teacher said nothing, but ordered several games, such as ping-pong, Mrs. Wiggins, flinch, dominoes, etc., gathered together a number of magazines and books, and asked the boys to come up and spend the evenings. A few came and they told the others, and soon it took three of us to keep things going, for the house was full. The teacher believes that this was the greatest good done. It was impossible to have them oftener than once a week. A room for games and reading should be open each night for them, with proper lighting and heating facilities.

The work among the women was carried on principally through the woman's organization. The teacher's wife showed many who took interest in the work how to cut out patterns and loaned many to them. In school the girls were taught the rudiments of sewing, making handerkerchiefs, aprons, etc. The sewing machine sent this year is much appreciated; more than 100 garments have been made with its help. The natives are buying their own machines now and many homes have them.

Instruction in manual training for the boys was impossible, as the school does not boast enough usable tools. Perhaps it is just as well, for the boys receive much practical training in helping their fathers build boats and houses. If it were possible to give them a complete course it would be different, but a mere smattering is a waste of time under the conditions here. In place of actual manual training, book work was given, showing the more advanced ones how to lay out plans, read drawings, figure dimensions, etc., and I have seen good results in actual work.

In the spring, with the natives coming and going, it was very hard to do any more Red Cross work, but we held a basket social during the week devoted to the Red Cross drive, at which we took in $226; $61.75 was added in contributions, and later in the week $217 was collected at the cannery, making the total for Red Cross week $504.75. In the meantime the membership has been swelling slowly, and now we have 125 members.

The teacher and missionary were appointed to sell War Saving certificates and to date have sold $2,625. None of the first or second Liberty bonds were brought here, but $350 worth was taken in the third. Counting all the various patriotic enterprises undertaken by our little town, something over $3,616.25 has been given or subscribed. This amount, in proportion to the population, would put to shame many a large city. At one of our mass meetings a letter was sent to President Wilson, assuring him of our loyal support. Several weeks later an acknowledgement came; the natives appreciated very much being recognized by the highest official of our Nation.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT SITKA, IN SOUTHEASTERN ALASKA.

By Mrs. Elizabeth P. Brady, Teacher.

School work.—Great stress has been laid upon the study of local geography. Every house in the village has been located upon an outline map. This was followed by a map of the town of Sitka, which resulted in a study of interdependence, comparison of surroundings, and emphasized needed improvements. English is now much better understood and spoken much more correctly. Stories are reproduced in a lighter way and with pleasure. Questions are asked that show an eagerness for broadening information. Kipling's "Just So Stories," parts of "Alice in Wonderland," and "Red Cross Stories" have been enjoyed. Stories of Greek mythology have brought out some Thlingit myths.

In arithmetic, problem work has improved, all work is done more neatly, and drill work has become more rapid and accurate.

In reading, understanding of the text has improved, and this results in better expression. Dramatization has been a great factor in this.

Study of hygiene has given immediate results in personal cleanliness and better habits. The latest gain was the appearance of pocket combs after lessons on care of the hair and danger of disease from use of a common comb.

Spelling has become interesting, and dictionary work was taken up in the third and fourth grades, with the following contribution from an 11-year-old boy. He set aside a page in his blank book for words beginning with each letter of the alphabet.

Nature study has been stimulated by contribution of material by the pupils.

There has been little weather suitable for outdoor games. Folk dances and games have been used indoors. Baskets were put up in one of the schoolrooms, and basket ball was played at the noon hour and after school. A folding pool table loaned by one of the pupils for two weeks was set up in the other schoolroom. We need a pavilion fitted with playground apparatus, where the children may play in the fresh air and yet be protected from rain and snow.

The children have been greatly interested in the history and authors of some of our patriotic songs. They have learned America, the Star Spangled Banner, Columbia, the Gem of the Ocean, Loyalty, Over There, and the Battle Hymn of the Republic. The negro plantation melodies find a responsive chord in the hearts of these school children.

Industrial work.—For all the industrial classes an effort was made to formulate courses that could be worked out with the present equipment and result in the most practical benefit in the homes. Notebooks were kept by the pupils in which were recorded the steps taken.

In cooking, yeast white bread, rye, rolled-oat bread, corn bread, rice bread, ginger cookies, rolled-oat cookies, war-time cake, puffed-rice candy, cranberry jam, gooseberry conserve, cocoa, and tea were made. Practical applications of the housekeeping lessons were made in the care of the school kitchen, sewing room, and classrooms. Most of the lessons in cooking were given at the home of the teacher, for the oven at the schoolhouse is not dependable.

Agriculture has been largely theoretical. A few potatoes were left in the school garden, and these were dug in October. Seeds were distributed, preparation of soils and ways of planting were studied, but school closed before planting time.

Health.—There has been no epidemic, but there were several very painful illnesses and nine deaths. Miss Gibson's visit was timely, for she was here to attend to several critical cases. During her treatment of those cases it was realized most fully that a small hospital was needed in this village. The people appreciate what the Bureau of Education is doing in its medical work and they wish to cooperate. As soon as something definite regarding cost of building, equipment, and plans is placed before them they will act upon this matter.

Community work.—There has been an effort to extend the usefulness of the school as much as possible. Much house-to-house visiting has been done. A trained nurse who was visiting in Sitka kindly consented to talk to the mothers on the care of babies. She emphasized the need of cleanliness, care of eyes, ears, nose, throat, and teeth, and of regular and properly prepared meals.

Parents have not taken kindly to industrial work. They wanted their children taught what is in books. To overcome this the mothers were invited to the schoolhouse, and while refreshments prepared by the girls were being served the plans for sewing, cooking, and woodwork were outlined.

The conservation-of-food campaign that was held in the autumn, the school was able to fill a need in the village. The problem of using substitutes and getting satisfactory results was a serious one. The women were invited to come to the schoolhouse. The making of war breads and cakes was demonstrated; receipts and directions were distributed.

The school has endeavored to foster patriotism. On Alaska Day an evening meeting was held. Patriotic songs were sung. The relation of Alaska to the world struggle was the theme of the talk by the mayor of the town. At this meeting was aroused the interest in bonds, which the natives bought so freely.

Junior Red Cross.—A Junior Red Cross was organized in the school. The pupils elected officers from their own number and had their first experience in condcting meetings. They made two layettes, both boys and girls doing the sewing.

Red Cross, War Savings, Bonds.—The native people responded well when they were asked to organize a Red Cross auxiliary, 148 becoming members; of these 28 subscribed for the Red Cross Magazine. From membership fees and entertainments they raised $480. When a request came from Juneau for moccasins, the women gathered in the sewing room of the schoolhouse and made them. The natives have been generous contributors whenever a Red Cross call has been presented to them. During the drive $100 was the result of house-to-house visits in the native village. No one was ungracious to the collectors. They gave a dance which netted over $100, and they spent their money freely at the carnival which closed the week's drive. They have pledged $50 per month to the fund while they are engaged in the summer fishing, which takes many of them away from the town. Two thousand eight hundred and fifty dollars worth of bonds have been purchased. One is owned by a pupil of the school; two have War Savings certificates; and 17 Thrift Stamps have been purchased, with the hope of adding as the money shall be earned.

The sewing room of the school was used by the native Red Cross auxiliary for their workroom. The schoolhouse was thrown open one day after school closed for an ice-cream sale given by the native missionary society.

A night school was organized for the purpose of holding classes in English and civil government. The attendance was small, but the time was well spent in that those who were able to come really felt a need.

The dramitization of Cinderella and the Three Bears at Christmas time was a great success. The Alaska Native Brotherhood furnished a treat for the children that was in keeping with war-time regulations.

On Washington's birthday all the schools in the town united in giving a patriotic program. A little play, "Washington's Birthday," was given very successfully by the native children.

The Alaska Native Brotherhood has constructed a fine hall on the water front near the center of the village, and it is here that cottagers and the people of the village assemble for their meetings and good times.

The large communal houses in the village are almost invariably tribal, and as such are open to one and all of the tribe, all sharing the expense or ignoring it, as the case may be. In many of the homes one finds as many as five families. The main floor is generally used only for celebrations, the second floor being divided into sleeping quarters, while narrow lean-to sections are provided for the cooking and storerooms. If the village town site could be properly surveyed with reference to improvement along cottage lines, and the land blocked out for the various families as nearly as possible in the sections where the tribal houses now stand, and this plan submitted to the village through a representative group of the people, it would give them some basis on which to work. The natives are extremely responsive to suggestion, and when they see the advantage they themselves will gain are eager to secure the desired object.

Many of our natives received large returns for their labor last summer. Some have been frugal and saved by investing in Liberty bonds; others have bought gas engines and paid old debts. With the increased means some former luxuries have come to be necessities. The great advance in the cost of food and clothing has consumed much of the large earnings.

It is encouraging to see the new life that has come to Sitka during the past year. It means work and progress for the natives. The Sitka sawmill has been working almost continuously all winter and spring, the first time it has been operated in over two years. The principal labor is native, the foreman being Peter Simpson, a cottager. The Booth Fisheries doubled the size of their cold-storage plant, and that has given employment to a number of natives. This spring the Pyramid Packing Co. put up a one-line cannery on a very complete and well-built scale. Many of the workmen were natives. They will also fish for the cannery during the coming fishing season, while many of the women will work in the cannery. Many of the natives are under agreement to return to other canneries which have advanced them money for engines and boats.

A clam and other sea-food cannery was started here on a smaller scale. This has given employment to several men and women rather regularly all winter. About 10 new fishing boats have been constructed here by natives this season, and this year 10 large seine boats will go from Sitka and about 65 smaller craft. All these activities emphasize the need for industrial training. Trained carpenters, masons, blacksmiths, and mechanics receive better wages; the natives see this and want the necessary training.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT JUNEAU, IN SOUTHEASTERN ALASKA.

By Mrs. Isabel A. Gilman, Teacher.

General conditions.—The natives of Juneau are prosperous, there being abundant opportunity for work in the vicinity. In winter the mines offer employdant at $90 a month; in summer the numerous canneries and packing outfits in southeast Alaska use native help that includes entire families. There are several good carpenters and boat builders in the village whose services are in demand. The women and girls make considerable revenue from the sale of beadwork and baskets. As a whole the natives of Juneau are industrious, healthy, comfortably housed, and fairly well versed in the ways of civilization. They are also thoroughly alive to the needs of their village. The village, being pile-built, is underswept by tides twice a day This affords easy means of securing fuel. Logs are drifted home and left safely anchored on a sandy beach at low tide; here they are sawed and split into stove wood. There is also safe and easy anchorage for boats of all sizes. About 21 feet of snow fell during the winter. When all city streets were obstructed and dangerous for a period of several months, the native town and the main avenue before it were comparatively clean.

The greatest needs of the people at present are a city drinking water supply, a public hall for athletic sports, and literary meetings during the severe weather.

Course of instruction.—Four grades have been maintained throughout the year, and the following subjects taught: Reading, spelling, oral and written language, and elementary grammar, penmanship, tables. and measures and fundamental drill in elementary rules of arithmetic. practical hygiene, and sanitation, elements of history and geography, citizenship and government, thrift and economy, war finance and patriotism, Red Cross knitting, patriotic songs and flag drills, personal cleanliness, neatness, good health, industry, general knowledge, and current events.

Regular and persistent instruction has been followed in matters of food conservation, elimination of waste, war savings, and self-denial in order that our soldiers may have food. Specialized instruction in war geography and history by the aid of maps, magazines, and daily newspapers, has awakened the natives to a better understanding of the demands made by the Government upon all people in the United States and Alaska. The natives have responded to calls made by the teacher for public meetings for discussion of these topics and readily pledged themselves to obey the Government. Some of the men have offered themselves for military duty whenever called upon to serve, and a feeling of regret has been several times expressed that the natives of Alaska were exempt, as a class, from conscription.

Red Cross work.—The Juneau native school was the first in the Territory to comply with President Wilson's suggestion and organize a junior auxiliary. Thirty pupils paid their dues. Knitting was taught to all the girls, and five pairs of wristlets for the soldiers were finished and turned in to the local chapter of the Red Cross before it was known that juniors were expected to work for the Belgian children. By this time many mothers had visited the school to watch the girls knit. Enthusiasm spread. A native auxiliary of women was organized at the schoolhouse with 35 active workers. Red Cross directions were followed, and the two auxiliaries became a happy family that filled the schoolhouse every Tuesday evening from 1 to 5 o'clock. The juniors preferred to continue knitting for the soldiers, and in this work their mothers kept them constant company. Many white visitors came to watch them at work. A large display of knitted work was made in a down-town store window, together with a photograph of the knitters. This attracted the attention of hundreds of white people and won many words of praise from the local press Altogether, at this writing 100 pairs of knitted socks, 14 pairs of wristlets, 24 hospital bed shirts, and 18 knitted wash cloths have been finished and accepted as perfect work by the Red Cross.

Health conditions.—With the exception of a few cases of measles among half breeds residing in the native village and attending the white schools, the natives have been comparatively free from sickness. The children are clean, healthy, well dressed, happy, and some of them are very bright intellectually.

By order of the mayor and the city council, as the native section lies within the city limits, District Supt. Hawkesworth closed the school one week as a preventative measure during an epidemic of diphtheria among the white people. There were no cases among the natives, and the school resumed work one week earlier than the city schools.

During the interim the teacher visited the homes, cheered the people, conducted a class in citizenship, and compiled the property report which accompanies this annual report. Regular attendance of mothers at the Red Cross meetings in the schoolhouse, at which all workers have been persuaded to wear white cover-all aprons, and the demand of the teacher that cleanliness be strictly adhered to, together with a few tea parties for social intercourse, have brought about a feeling of sanitary pride and cheerfulness. Cooperation and harmony are now thoroughly established, and a considerable part of the credit is due to Supt. Hawkesworth and Mrs. Hawkesworth.

Publicity.—Perhaps the most important work done by the teacher this past year has been conducting a campaign of publicity for the adjustment of certain erroneous ideas concerning the natives which were prevalent among the white population of the vicinity. This campaign was conducted through the medium of local newspapers and magazines. Hitherto the local press has recorded all the delinquencies of these people and has given much space to their criminal records, thereby placing more than half of the native population in a wrong light before the general public. When the Native Brotherhood held its convention in Juneau, the teacher found an excellent opportunity of placing before the reading public some of the good things accomplished by the order, and some of the hopes and ambitions of the future. This brought forth an editorial in the Alaska Daily Empire, which was widely copied by other papers both inside and outside the Territory. The newspapers were glad to print anything of interest that was properly written. The natives themselves were quick to profit by the publicity given them and evinced a desire to live up to the ideals expressed. Competitive patriotism, through reading of their own good work and that of their neighbors, resulted in much mental enlightenment in the Juneau native village. The success of the scheme has been far-reaching and remarkable. White people came to the school to see with their own eyes what was being done; others attended native meetings and were interested readers of native items. At this writing many of the native miners are regular subscribers to one, and sometimes two, daily newspapers; one man has been appointed "four-minute" speaker at church and at other public gatherings in the native village to inform his fellows on the progress of the war, explain to them the nature of the Liberty bonds, and other Government measures, including world knowledge.

Four natives have taken instructions and have applied for certificates of citizenship according to the territorial law, two of the members for the express purpose of having their daughters eligible to enter the fifth grade in the city schools in September—a precedent having been established the previous year. Altogether the outlook for Juneau is very encouraging. The present trend is toward the elimination of racial prejudice.

Library.—The school library has been extensively used and enjoyed by the more advanced pupils, also the magazines furnished by the teacher. Pupils have read the newspapers in school and then reread them to their parents with good results.

PART III—EXTRACTS FROM THE REPORT OF THE GOVERNOR OF ALASKA, 1918.

NATIVES OF ALASKA.

I have been devoting considerable time to the study of the various problems confronting the natives, but the tribes are so widely scattered and the conditions under which they live are so varied that at the present time I do not feel justified in going into the subject at length.

The Bureau of Education is doing splendid work, especially among the Eskimos who have been taught the value of reindeer herding. As a result many natives have become comparatively wealthy.

The various missionary bodies have been requested for reports on their activities, but to date only partial replies have been received and so can not be fully commented on. I have, however, visited a number of the mission schools and can testify as to the excellence of their endeavors and to the really constructive results accomplished.

ALASKA NATIVE SCHOOL SERVICE.

The schools for native children in Alaska are under the supervision of the Bureau of Education of the Interior Department, being directly supervised by five district superintendents in Alaska, responsible to the chief of the Alaska Division of the Bureau of Education, with headquarters in Seattle. For the past year these schools numbered 71, two of which were summer schools, having a total enrollment of approximately 3,500.

The majority of these schools are located in native villages, each of which is usually in charge of a man and wife. On account of the variety of the work in connection with a native school the Bureau of Education finds it advantageous to appoint married people. Not only must these Federal employees be capable of teaching school, but they must also possess practical abilities which will enable them to promote native industries, domestic arts, personal hygiene, social welfare, and in general improve the living conditions of the adult as well as the school population of the village and the vicinity.

The schoolroom and living quarters of the employees are usually under one roof, forming a center from which quite often there issues the only uplifting and civilizing influence in that community.

There has been and still is an attitude of aloofness toward the native population by the white people of Alaska which is not conducive to rapid advancement by the former race. Quite often the bureau employees and the missionaries are the only whites who seem to have any interest in the natives' welfare. Until a tolerant and sympathetic attitude is generally exhibited by the white race, the natives will be constantly handicapped in their efforts to reach a higher plane of civilization. The natives of Alaska are unquestionably an asset to the Territory, and the intelligent development and improvement of this asset will be remunerative to Alaska in many ways. These native Alaskans are self-reliant, law-abiding, and honest, and the only help they have had from the Federal Government is the establishment of schools in the larger villages, a little medical relief, and the introduction of reindeer among the northern and western tribes. This assistance has been given them though the organization of the Alaska Division of the Bureau of Education.

Because of the fact that the native population is very scattered and the villages have rarely over 200 or 300 inhabitants, and generally much less than that, the bureau's educational efforts have been rather hampered. Were the natives located in large settlements of 500 or more, their education, medical relief, and industrial advancement would be simplified considerably. To this end the bureau has gradually been working toward attracting the natives to selected sections of land which have been reserved for the exclusive use of the natives and the bureau. These reserves are not to be confused with the Indian reservations of the States, as they in no way interfere with the liberties and freedom of the native inhabitants thereon. By establishing industries on these reserves which will give the natives work the year around, schools that have more than the elementary grades, and by placing the care of their physical welfare in the hands of trained medical employees, the bureau will be able to secure maximum benefits to the natives. As long as the bureau's work is confined to numerous small villages, only minimum results can be expected at a heavy cost per capita. At the present time the small schools do not justify grammar grades, and it has been customary for advanced native children to enter the Indian schools of the States. This usually results in physical breakdowns, due to the change of climate, environment, and absence from home. It should be possible for native children to advance as far along educational lines as they desire without the necessity of leaving home. This can come only when the natives are persuaded to live in larger communities which will justify the establishment of larger and more complete schools. The concentratioh of the bureau's work on large villages, made possible through the favorable conditions of the reserves, will hasten the arrival of the day when the native of Alaska will take his place along with his white brother in the affairs of the Territory.

That the natives are loyal to the United States has been especially proved the past year through the work which the natives have contributed for the Red Cross and the purchases they have made of Liberty bonds and War Savings Stamps. Through the agency of the teachers, Red Cross auxiliaries have been established in many native villages, and the zealous and untiring work of these native organizations is a great credit to them. The work done in knitting, sewing, etc., for the Red Cross is equal to the best work done by white organizations.

The purchase of bonds and stamps has not lagged behind the Red Cross work, and while complete statistics of the Bureau of Education are not yet available on this subject, the reports from 11 native villages in southeastern Alaska show that $12,320.85 was contributed toward war-relief funds and that $9,700 worth of Liberty bonds and $283.70 worth of stamps were purchased. In these villages there are 1,303 Red Cross members, and during the year 16 sweaters, 328 socks, 118 wristlets, 220 gun wipes, 30 scarfs, and 12 moccasins were made for the Red Cross. It has been very gratifying to hear the numerous expressions of regret by natives throughout the Territory that they should have been exempted from the operations of the draft law, and it is hoped that the matter will be adjusted so as to allow the natives to share in this as well. Their participation will be a credit to the Territory, as have been their other war activities.

The need of a power boat for the bureau's work has been especially emphasized this year. The schools have been supplied this season with the greatest difficulty, and the shipments to the various stations have been necessarily haphazard and unsatisfactory. A notable example of the difficulties encountered is the shipment of hospital supplies and subsistence stores for teachers and a physician into Bristol Bay, which were to have been sent in by the August trip of the *Dora*. This trip, the last of the season for that section, was suddenly canceled and no other means was available. Since the supplies were imperatively needed by the stations in Bristol Bay, arrangements were finally made with the Pacific American Fisheries to carry them to King Cove, from which place the Coast Guard cutter *Unalga* is expected to have taken them to Unalaska, where they are to be transshipped to Bristol Bay via the *Admiral Watson*. Whether the needed supplies reached their destination is still a matter of conjecture. With a boat of its own, the bureau would have its shipping problems very much simplified. Such a boat would be used during the summer for the shipment of supplies and transportation of employees, who now must quite often be sent in small gas boats and vessels of doubtful seaworthiness. The bureau should not have to be placed in the position of asking its employees, who are self-sacrificing enough to enter its service, to risk their lives and property in reaching their stations. After completing the summer's shipping, the boat would be available as a training ship at the bureau's stations in southern and southeastern Alaska, where navigation is open throughout the year. Thus the boat would be put to useful service the year around. It is to be hoped that Congress will promptly make possible such a boat for the bureau.

To a considerable extent, the questions arising in connection with the fishing industry of the Territory involve the consideration of the natives' welfare. The native people of Alaska are primarily fishermen. They are an important factor in the industry, and fishing to them is essentially a means of livelihood. The elimination of fish from the natives' diet means the omission of the greater part of his natural food, resulting in actual want and serious illness. Consequently, the question of commercial fishing in the rivers of Alaska is of vital interest to the natives. The past year has seen the partial closing of the Copper River to commercial fishing. Whether the regulations issued are sufficient to result in reestablishing the food supply of the Copper River Indians will be ascertained after they have been in force a reasonable length of time. The establishment of a cannery at Andreafsky, on the lower Yukon, brings up a similar question. While one or two canneries would probably not seriously interfere with the supply of fish for the upper Yukon, it is very probable that the number of canneries would increase each year until the river would become overfished, as was done in the Copper River. If commercial fishing must be permitted in rivers, a policy of limited fishing is the only one that will safeguard the food supply of the natives.

ALASKA NATIVE MEDICAL SERVICE.

In the list of duties for the teacher of a native school there appears that of medical relief, which assumes considerable proportions if the village is of good size. Some of the more important centers of native population are provided with trained nurses, but at the majority of villages the teacher must attend to the physical welfare of the inhabitants. Each school is provided with a very complete standard medical set, consisting of the more common medicines and medical equipment, with a view toward enabling the teacher to relieve the less serious ailments and afford temporary relief in cases requiring the attention of a physician. Each station is also provided with a medical book written especially for use in connection with the medical equipment furnished the schools. Through necessity some of the teachers become quite expert in this phase of their work. In this they are aided materially by the fact that the natives have marvelous recuperative power and quite often only a little medical assistance is necessary to bring them back to health.

During the past year the Bureau of Education also operated a very complete 20-bed hospital for natives at Juneau, which was kept filled the greater part of the year. The hospital at Kanakanak, on Bristol Bay, was enlarged and completely equipped for 11 beds capacity. A modern hospital was erected and placed in operation at Akiak, on the Kuskokwim. Its capacity is also 11 beds, together with comfortable quarters for the staff. A small hospital, in charge of a physician and nurse, was also maintained at Nulato, on the Yukon. In addition to the hospitals, physicians were stationed at Nome and Cordova, and contracts were had with resident physicians at Ellamar, Candle, and Council to care for cases in their localities. Besides a traveling nurse for southeastern Alaska, nurses were appointed at St. Michael, Unalakleet, and Metlakatla.

In view of the thousands to be reached and the vast territory to be covered, it is readily apparent that the above means of meeting the medical needs of the natives is wholly inadequate. The bureau's appropriation of $62,500 is just half of the minimum amount needed during normal times to make an effective beginning. On account of the great advance in prices of drugs, etc., not less than $150,000 should be appropriated for this year. Educational advantages are of little benefit to the native if he is not assisted at the same time in keeping his body healthy, so as to enable him to make the best possible use of that which his mind acquires. The appropriations for education and medical relief of the natives must necessarily go hand in hand and the proper equilibrium maintained between them.

This fall the bureau plans to open a tubercular sanitarium at Haines, establishing the same in the building formerly occupied by the Presbyterian Mission Hospital. To avoid a duplication of work in southeastern Alaska the mission board has turned this building over to the Bureau of Education for its use in maintaining a sanitarium, and the bureau has relinquished its medical work at Hydaburg and Klawock, where the mission board will be in exclusive charge of the medical work among the natives. The arrangement should be mutually advantageous. The establishment of a tubercular sanitarium has been planned for several years and will fill a long-felt need in southern and southeastern Alaska. In the past tuberculosis, which is quite prevalent among the natives, has been very hard to combat since isolation of the cases was impossible. The spread of the disease was therefore unavoidable. However, with a sanitarium at hand, to which the patients can be sent for proper diet, treatment, and instructions, a long step will be made toward checking the disease in the section which the Haines establishment will serve.

With a hospital at Juneau for the surgical cases, and a sanitarium at Haines for tubercular patients, southeastern Alaska will be served very effectively. It is to be hoped that Congress will soon enable the Bureau of Education to make similar provisions for the other sections of Alaska, which are equally in need of medical assistance.

ALASKA REINDEER SERVICE.

In 1892, and continuing for 10 years, 1,280 reindeer were imported into Alaska from Siberia. From this nucleus there are to-day in Alaska over 110,000 reindeer, distributed over all of western Alaska from the Alaska Peninsula on the south to Point Barro on the north. On account of the unavoidable delays in securing reports from all the herds, complete statistics for the year are not yet available. The Bureau of Education report for the year ended June 30, 1917, shows a total of 98,582 deer in Alaska, distributed among 98 herds; 67,448, or 69 per cent, were owned by natives; 23,443, or 23 per cent, by Lapps and whites; 4,645, or 5 per cent, by missions; and 3,046, or 3 per cent, still remain Government property. The ownership of the native deer was divided among 1,568 natives, of whom 170 were apprentices and 1,398 owners and trained herders. An income from their deer amounting to $97,515 was realized by them. The income accruing to owners other than natives amounted to $35,002, making a total income realized from the reindeer industry of $122,517.

Reindeer were introduced into Alaska by the Government in order to insure a food supply and economic independence for all the natives of Alaska living in sections where deer could be propagated. The industry is now firmly established, the widespread distribution of the deer being the result of a system of apprenticeship whereby the most likely natives are taken on as apprentices by the herders for four years, receiving during that time 6, 8, 10, and 10 deer for the first, second, third, and fourth years, respectively. If at the end of the fourth year the apprentice has served satisfactorily, he becomes a herder, assuming charge of his deer. He in turn is required by the rules and regulations to take on apprentices in the same manner that he served as apprentice. The perpetual distribution among the natives is thereby assured.

Since the deer were imported for the benefit of the natives, the industry has been restricted to them as much as possible. No native is allowed to sell female deer except to another native or the Government. Until 1914 no white men had acquired deer, except the Laplanders, who had been brought to Alaska at the time of the introduction of reindeer into Alaska for the purpose of teaching the natives the art of herding. For their services the Lapps were given reindeer without restrictions as to future sales of female deer. By this means it was possible for Lomen & Co., of Nome, to acquire 1,200 deer in 1914. The next two years this company made additional purchases from the missions at Golovin and Teller, the latter of which has since been the subject of litigation by the Department of Justice at the request of the Interior Department. The case is based on alleged violation of contract by the Teller mission, which, in common with other missions in Alaska, received deer from the Government for the purpose of assisting in the distribution of deer among the natives. All missions have always been held by the department to be under the same restrictions as native owners. The final outcome of the Teller case will determine the department's action regarding the Golovin sale, which is similar to the Teller case, except that the Golovin contract appears to have been an oral one made in the early days of the industry, the exact terms of which can not be definitely established. The decision in the Teller case will also have an important bearing on all deer now owned by the missions. The details of the above have appeared in previous issues of the annual report of this office. Up until the present the industry has been supervised by local representatives of the Bureau of Education, but it has now grown to such proportions that a scientific management is imperative. At least two or three experienced stockmen should be placed in the field to give their entire time to the study of the problems of the industry. Diseases of the deer should have careful attention, as well as scientfic herding, breeding, butchering, and marketing. The reindeer of Alaska represent an immense food supply, not only for the Territory, but for the entire country. The economical and permanent entry of reindeer meat upon the market of the country is a problem that will require much study and careful management. The present high prices of beef, pork, and mutton make this an opportune time to take up this subject energetically. It is important to the country, as well as to the Territory, that the increased appropriation asked for by the Bureau of Education be allowed by Congress in order to make possible the employment of the experts mentioned. Undoubtedly the white owners of herds will cooperate.

Reindeer are cursed with warble flies, which were evidently brought to Alaska with the original herd. If the warble pest could be eliminated there is no reason why a glove industry equal to that of Sweden could not be established right in Alaska.

The following table shows what a financial success this phase of Government enterprise has been during the 25 years since its inception:

Valuation of 67,448 reindeer owned by natives in 1917, at $25 each	$1,686,200
Total income of natives from reindeer, 1893–1917 (25 years)	568,352
Valuation of 31,134 reindeer owned by missions, Laplanders and other whites, and Government, 1917	778,350
Total income of missions and Laplanders and other whites from reindeer, 1893–1917	214,443
Total valuation and income	3,247,345
Total Government appropriations, 1893–1917	317,000
Gain (926 per cent for 25 years, or an average annual gain of 37 per cent)	2,930,345

Perhaps the attitude of the Bureau of Education is somewhat at variance with my own, but I believe that where the reindeer industry can be encouraged among the whites without detriment to the natives every assistance should be offered, as it is only through the white owners and shippers that it will be possible to add to the food supply of the country at large. With the herds scattered over such a large extent of territory, and with such great distances to travel to reach the few shipping points on our west coast, it will soon become necessary to establish cold-storage plants at certain points in order to preserve the meat of the surplus deer. In this the whites interested in the industry can be of greatest service to the native deer men. The Government has no funds with which to create a market, nor with which to preserve the meat for the market, so that this particular branch of the industry must naturally fall to the whites.

APPENDIX.

LAPPS AND REINDEER IN SWEDEN AND NORWAY.

INFORMATION FURNISHED BY MR. HJALMAR LUNDBOHM,
Delegate of the Royal Swedish Government.

Most of the figures and some of the information in regard to Sweden were gathered by a commission which at present is negotiating with a Norwegian commission in order to settle the difficulties which are always to be found when Swedish Lapps migrate into Norway. The figures are furnished by the forester, Mr. Arvid Montell, who is a member of the commission.

The Norwegian data were mostly taken from a lecture given by the inspector of reindeer and Lapps in Norway, Mr. Kristian Nissen, as published in the year book of the Norwegian Geographical Society (Det Norske Geografiske Selskabs aarsbok, 1914–15). This pamphlet gives a very good view of the whole Lapp situation in Norway, historical notes about the Lapps, and many other things of value to those who are interested in these people.

The total number of Lapps is not very great. The latest official reports give the following figures: Norway, about 20,000; Sweden, 6,000 to 7,000; Russia, about 1,700; Finland, about 1,500; total 30,200.

The total here given may, however, be a little low. The whole number might be estimated at about 40,000.

There is only a comparatively small percentage of Lapps who live on the reindeer; a large number, especially in Norway, getting their livelihood from agriculture and from fishing.

The agricultural Lapps are probably in most cases descendants of the Nomads, or " reindeer Lapps," who have decided to settle down and do farming instead of nomadizing. There may be several reasons for this, but one is no doubt that in certain districts there has been a lack of food for the reindeer, and consequently it has been easier to make a living, even if very simple and poor, by agriculture. In other cases the Government or other interested parties have induced the Lapps to settle as agriculturists, as especially during a certain period of time, it was thought to be very desirable to have the land settled and farmed. In this respect it has often not been realized that agriculture gives a very much smaller revenue than the reindeer service, and thus a part of the population has been induced to live a poor life, without the possibility of utilizing the opportunities of nature. The Swedish Government has, however, always, but especially in the later years, realized the importance of giving the Lapps the protection which makes it possible to continue their original life.

The fishing Lapps, in most cases, originate from the Nomads, having preferred to get their living in a comparatively lazy life as fishers, instead of in the more strenuous life as nomads. In many cases poverty seems to be the real reason for the transition into the fisher's life. It is, however, not improbable that some of the fisher Lapps in Norway have ancestors who came to the country earlier than the Nomads.

If you divide the Lapps into groups, according to their chief livelihood, of reindeer service, agriculture, and fishery, you will find that the nomad Lapps, or "reindeer Lapps," are very much fewer than the others.

In Norway there are only about 1,260, or one-sixteenth of the whole number living exclusively on the reindeer.

In Sweden we distinguish between nomadizing Lapps and forest Lapps, the latter generally live in houses, but at any rate get their livelihood chiefly from reindeer. The reindeer, however, do not migrate as those belonging to the nomadizing Lapps. The reindeer of the forest Lapps are a little different from the other, being somewhat larger, and the year around these deer rove about in the neighboring woods.

The latest statistics are as follows: Sweden—Nomadizing Lapps, 2,791; forest Lapps, 465; total, 3,256. These Lapps live exclusively by the reindeer service. Finland—Reindeer Lapps in 1900, about 300. Russia, unknown.

One can, however, with certainty estimate the whole number of nomads in Sweden, Norway, Finland, and Russia to be between 5,000 and 6,000.

According to statistics collected during 1911 to 1915, the number of reindeer in Norway was 141,755. In this case, calves younger than 1 year are not counted. Nissen has expressed the opinion, however, that this figure is a little too low, and suggests that there are at least 150,000.

According to statistics made in 1909–1911, the number of migrating reindeer, or as they are called, "mountain-reindeer," was, in Sweden, 283,177; and forest-reindeer, 41,488; making a total of 274,625.

In Norway the nomadizing Lapps live chiefly in the northernmost Province, Finnmarken; residing in the summer along the coast of the Atlantic Ocean, and in the woods nearer the Swedish border in the winter, especially in the two parishes of Koutokeino and Karasjok. Smaller in number are the reindeer herds in the parishes of Polmak and Sydvaranger. Farther south there are reindeer Lapps in several sections of Tromso, Nordlands, and Trondhjems amt, but there the number of reindeer is much smaller.

In the southern part of the Kingdom a number of efforts have been made to utilize the vast high mountains for reindeer service. The first time, as far as known, about 1780, in the district called "Hardangervidden," these experiments did not show any good results, but they were renewed again several times later in a number of places in the Kristians amt and the Buskerude amt. The manner in which these experiments were carried out was generally the forming of small companies by farmers and others owning the herd, sometimes consisting of a couple of thousand animals. Most of these small companies have failed, but after a while new companies have been formed and the business started again. During the years 1880 to 1910, there was great prosperity; the chief reason, however, being that young Lapps were engaged to keep the herds owned by the small companies, whose shareholders usually were farmers of the district. During this period the number of reindeer continued to grow, and probably went as high as up to 40,000. Since then, there has been a decline, and the number of reindeer in the southern part of Norway, outside of the old reindeer district, is at present estimated at about 15,500. The reason for this decline in the reindeer service is, by K. Nissen, supposed to be that there is not sufficient food; the reindeer moss, which is the chief winter food, occurring in a comparatively small amount. Another very important reason, Nissen says, is that there are numerous wild reindeer in the district, and it is impossible to keep tame deer where the wild animals are in abundance. The wild reindeer in many ways spoil the tame, and further, very often the antagonism between the hunters and reindeer owners causes great difficulties.

In Sweden the reindeer nomads live in all the parishes along the boundary between Sweden and Norway from Finland in the north to Idre in the province of Darlecarlia—a distance of about 600 English miles, or more than half the whole length of the country.

Lapland, the northernmost of the Swedish provinces, reaches from latitude 64 degrees to nearly 69 degrees and comprises about one-fourth of the total area of Sweden, which area is about 173,000 square miles. Most of the Lapps live in this province, but even in the provinces, Vesterbotten, Jamtland, Harjelalen, and Darlecarlia there are some Lapps.

In all the provinces the Lapps are, of course, in a great minority; only in one parish, in the northernmost part of Sweden, do they amount to more than half of the whole population.

The mountain Lapps, or nomads, do not live in any particular place, but divide into tribes migrating in certain districts. For instance, in the two northernmost parishes in Sweden, where the Lapps are most numerous, they migrate in the forest region south of the Norwegian border the whole winter; in the spring they move over the frontier and continue slowly down from the high mountains to the Norwegian coast, from where some of the reindeer herds, amounting to many thousands of animals, swim over the fjords out to some of the big islands, where they are pastured the whole summer. In the fall they move back to the high mountains and from there down again to the forest region. The distance which some of the Lapps move twice a year is in certain cases 100 to 150 miles, and in this way they have gone on moving and moving for hundreds or perhaps for thousands of years.

From the southern part of Lapland, the Lapps only move 20 to 30 miles into Norway, but there, and in provinces south of Lapland, they usually go down into the forest region in Sweden, sometimes as far as to the coast of the Baltic Sea. Thus the whole northern half of Sweden is inhabited by migratory Lapps during a part of the year.

The forest Lapps are found chiefly in some small districts situated between the Baltic and up to 100 miles therefrom.

The nomads, as a rule, live in huts all the year around, moving with the reindeer herds. This, many times, especially in the winter, makes an extremely hard life, but still, it is very healthful. In the later years there has been a certain tendency among some of them to build houses or more substantial huts of wood, and to keep their families there. This has a very bad influence upon the reindeer service as well as on the health of the Lapps. It has been observed that tuberculosis is much more prevalent among the families that live in houses than among those who keep to their old mode of living in huts made of cloth.

The Swedish Lapps, however, as mentioned before, have many difficulties to deal with. The farming settlers in Sweden have gradually gone farther north in the district, where the Lapps formerly were alone, and as the reindeer sometimes spoil the hay belonging to the farmers, conflicts very often arise in which the Lapps, who commonly are held responsible for the damage, are the sufferers. Still worse is it in Norway, where both the officials and private people to a certain degree work against the Lapps.

At present there is a Swedish-Norwegian commission working on the solution of these problems, and trying to establish rules which can make the existence of the Lapps safer. It is also worth making it safe. The big mountains along the frontier can not be advantageously utilized by other people than the nomads, and to the whole country the reindeer service is a very important and useful industry.

It is very often said that the Lapps are dying out, but experience does not prove this. Of course, as soon as railways are built through the country and

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 41

AN EDUCATIONAL STUDY OF ALABAMA

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, June 17, 1919.

Sir: I am submitting herewith the report of a survey of public education in the State of Alabama, including all schools that receive any part of their support from the treasury of the State.

The survey was made under my direction, at the request of the Alabama Survey Commission, created by act of legislature as set forth in the introduction to this report. On June 9, 10, and 11 the report was submitted by me to the Survey Commission, through Dr. Harold W. Foght and Dr. Samuel P. Capen, specialists in rural education and higher education, respectively, in this Bureau, and was approved and received by the commission.

I recommend that the report be published as a bulletin of the Bureau of Education for distribution among the citizens of Alabama and students of education throughout the country.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

AN EDUCATIONAL STUDY OF ALABAMA.

INTRODUCTION.

An act of the Legislature of the State of Alabama, containing the following provisions, was approved by the governor February 6, 1919:

> 1. That the governor shall appoint a commission of five persons * * * to make a study of the public educational system of Alabama, including all schools and educational institutions supported in whole or in part from public funds, to determine the efficiency of the same and to report its findings, with recommendations for increased efficiency and economy, to the governor on or before July 1, 1919.
>
> 2. That the said commission is empowered to employ expert assistants in the several fields of public education in which the State is engaged. * * *
>
> 3. That the said commission and its employees shall have free access to all public records. All public school and educational institutions, teachers, instructors, faculties, officers, and employees shall furnish all information and assistance in their power in making such a study as is contemplated under this act. * * *
>
> 4. That said commission shall, in addition to other work specified by this act, direct special attention to the feasibility and the advisability of consolidating any of the existing State educational institutions or departments thereof, of eliminating any institution or institutions, and of coordinating and unifying the work of any or all institutions under one board of management and control.
>
> 5. That there is hereby appropriated, out of any money in the treasury not otherwise appropriated, the sum of $10,000 * * * for the purpose of defraying the cost of the study herein proposed.

On the 11th of March, 1919, the Alabama Education Commission created by this act met in the capitol at Montgomery to outline the work of the survey and to listen to comments on the plan by Dr. Wallace G. Buttrick, of the General Education Board, and to Dr. Philander P. Claxton, United States Commissioner of Education.

The commission passed the following resolutions:

> Whereas the Educational Commission has been created in accordance with an act of the legislature approved February 6, 1919; and
>
> Whereas this commission must submit its report to the governor on or before July 1, 1919; and
>
> Whereas the scope of the work prescribed in said act comprehends the entire public-school system of Alabama; and
>
> Whereas the discharge of this duty will necessitate the collection and tabulation of certain technical and scientific information by experts; and

Whereas the United States Bureau of Education is the legally constituted head of the public-school system in this country: Therefore, be it

Resolved, 1. That the United States Bureau of Education is hereby invited and requested to accept the task of making the scientific study of the entire public-school system of Alabama, upon the terms and in keeping with the plan outlined by Dr. P. P. Claxton, United States Commissioner of Education.

2. That so much of a sum of $8,500 as may be necessary be set aside from the State appropriation of $10,000 to pay the expenses of those working under the direction of Commissioner Claxton for the provision of clerical help and supplies and honoraria to three or four men outside of the staff of the Bureau who are also to be asked to serve in an advisory capacity.

3. That the Commissioner of Education and those working under his direction be clothed with all the authority conferred under Section III of the act to secure information that may be deemed necessary to make a full and complete survey of public education in Alabama, and to this end to require the production of papers, records, and information under oath from any person or persons engaged in public school work.

4. That the Commissioner of Education and his staff report the results of said investigation and findings to the commission by June 6.

In accordance with these resolutions the Commissioner of Education began the work of the survey March 12. The actual field work continued from that date until the 31st of May. Because of the very brief time available for the study, an unusually large number of persons were engaged in it. Their names and their respective contributions to the report appear in the following paragraphs.

The interrelations of the higher institutions were judged to present certain complications. On this ground it seemed advisable to associate with the Bureau's regular staff for the investigation of these institutions an advisory committee made up of representatives of various phases of higher education. The members of this committee were President E. A. Alderman, of the University of Virginia; Dr. C. R. Mann, chairman of the advisory board of the committee on education and special training of the War Department; President A. F. Woods, of the Maryland State College; and Dr. Horace D. Arnold, formerly dean of the graduate school of medicine of Harvard University, who was called in as a special adviser in regard to medical education.

Dr. H. W. Foght had general charge of the field work and the preparation of the manuscript, except the sections relating to higher education. Dr. Samuel P. Capen had charge of the investigation of the higher institutions and the preparation of this section of the report.

The field studies were organized under several group headings, and each study in charge of the survey personnel enumerated below:

1. *General School Organization and Administration.*—Dr. H. W. Foght.
2. *History of Education in Alabama.*—Mr. William R. Hood, division of school legislation, Bureau of Education.

3. *Rural and Agricultural Education.*—Mrs. Katherine M. Cook, specialist in rural education, Bureau of Education; Walter S. Deffenbaugh, specialist in education in villages and towns, Bureau of Education; Mr. C. H. Lane, regional director, the Federal Board for Vocational Education, and Dr. H. W. Foght.
4. *City Schools.*—Mr. P. W. Horn, superintendent of schools, Houston, Tex.; Dr. Frank F. Bunker, specialist in city school systems, Bureau of Education; and Dr. J. J. Didcoct, professor of secondary education, George Peabody College for Teachers.
5. *Higher Education.*—Dr. Samuel P. Capen; Dr. Chester D. Jarvis, specialist in agricultural education, Bureau of Education; Dr. Walter C. John, specialist in land-grant college statistics, Bureau of Education; and Mr. J. J. Pettijohn, director of the extension division, Bureau of Education.
6. *Preparation of Teachers.*—Dr. Willis E. Johnson, president Northern Normal and Industrial College, Aberdeen, S. Dak.; Dr. H. W. Foght; and Dr. Samuel P. Capen.
7. *Special Education:*
   Negro Education.—Mr. Walter B. Hill, special collaborator, Bureau of Education; Dr. Thomas Jesse Jones, special collaborator, Bureau of Education; and Mr. Jackson Davis, general field agent, General Education Board.
   School Health and Physical Education.—Dr. Hiram Byrd, the United States Public Health Service; Dr. Willard S. Small, specialist in school hygiene and sanitation, Bureau of Education; and Miss Martha Stevens, director of health education.
   Home Economics.—Miss Carrie A. Lyford, specialist in home economics, Bureau of Education.
   Home and School Gardening.—Mr. John L. Randall, regional director, United States School Garden Army.
   Education of Delinquents, Defectives, and Illiterates.—Dr. H. W. Foght.

The recommendations relating to higher education were submitted to the members of the advisory committee on June 2, and Messrs. Mann and Woods concurred in all. President Alderman dissented from Recommendations 15 c–4, 15 j, 15 k, 15 n, and 15 o–1.

On June 7 the chapters dealing with higher education were presented to the presidents of the University of Alabama and the Alabama Girls' Technical Institute, in Montgomery. On the 8th and 9th of June these same chapters were presented to the president of the Alabama Polytechnic Institute, in Montgomery. The purpose of these conferences was to correct any possible misstatements of fact. As a result of them a few minor changes were made in the phraseology of the report and one recommendation was changed.

On June 9, 10, and 11 Messrs. Foght and Capen presented the report of the survey committee to the Alabama Education Commission, at Montgomery.

The staff of the Bureau of Education and its associated investigators gratefully acknowledge their obligation to the members of the Alabama Education Commission for their many courtesies and hearty cooperation throughout the study; to the State department of education for valuable help in procuring and compiling educational statistics; to the director of the department of archives and history for valuable documentary information; and to the heads of the State's educational institutions, the county and city superintendents, and the teachers of the State for valuable advice and constant cooperation.

Chapter I.

ALABAMA, THE LAND AND THE PEOPLE.

Main topographical features.—Alabama is situated in the east South Central Division of States, in the heart of the "cotton kingdom." It contains an area of 51,279 square miles, 711 square miles of this being water. The State falls naturally into two great topographical divisions—the Appalachian area and the coastal plain, the dividing line between the two running roughly from the northwestern part of the State through Tuscaloosa to Montgomery, thence swinging in a bold curve toward a point near Columbus, Ga. The mean elevation above sea level is about 600 feet. To the north and east of this line the surface rises gradually to 1,800 feet, with occasional heights of 2,400 feet in the Talladega Mountains. To the south of the dividing line, the surface falls gradually toward the south and west till the tidal plain is reached. The main axis and watershed of the Appalachian area runs through Coosa, Clay, and Cleburne Counties. East of this lies the Talladega Mountains, a rugged mountain ridge east of which lies the Ashland Plateau with an altitude of nearly 1,000 feet. To the west and north of the mountain axis lies the fertile Tennessee Valley, fringed on the south by a great mountain "rim," rich in coal and iron and limestone.

The Tennessee Valley, or more correctly speaking, Tennessee Plateau, is traversed the whole width of the State by the Tennessee River. This is the blue-grass section of Alabama. Its soil is in the main a deep red clay, well-drained and easy of culture. This section of the State is well suited to the production of the staple grains and live stock. The Tennessee River offers great possibilities for development of water power, the most noted natural reservoir being located at Muscle Shoals. South of this river plateau rises a low ridge of mountains known popularly as the "rim," underlaid with rich deposits of iron, coal, limestone, and marble. The great Birmingham industrial district forms the heart of this section.

The Alabama black belt, so called because of its rich black muck soil, embraces a great rolling prairie southward of the Appalachian area and extending to the coastal plain. Its soil is remarkably fertile, despite the fact that it has been "cottoned" for upward of a hundred years, under the indifferent plantation system that is now beginning to pass away. By degrees farming in the black belt is becoming diversified; live stock and alfalfa have already transformed some parts of it, and soon the entire belt should become one of the greatest stock-growing and dairying sections of the South.

The gulf coastal plain embraces the entire southern portion of the State south of the prairie black belt. Its topography varies from level to gently rolling lands, watered by small streams, which in the main afford a good drainage system. The soil is largely a sandy loam particularly well adapted for truck farming and fruit growing. In places this region contains pine and oak uplands, with here and there, toward the coast, pine barrens, much of which is yet largely undeveloped.

Early spread of population influenced by this topography.—In addition to the bold curving Tennessee in the north, the State is traversed by the great Alabama-Tombigbee River system, navigable for many miles northward from Mobile Bay. Of the tributary rivers the Coosa drains the rich Coosa Valley, noted for its agricultural wealth and famous also for its unlimited water power. The Warrior is also noted for its great possibilities in water power and for its wealth in agricultural lands. These rivers have all played a great part in the development of the State. In the early historic days the population moved northward from Mobile, following the deep-water courses. Others came southward from Kentucky and Tennessee, down the river of this name, where they passed by land over the rim to the Warrior and Tombigbee, down which they gradually spread. Other pioneers from North Carolina, South Carolina, and Georgia advanced down the Coosa River into the heart of the State. Meanwhile there was a gradual inflow of Georgians along the entire eastern border of the State.

Climate of the State.—The climate of Alabama is regulated largely by such controlling factors as elevation above sea level, geographical trend of the highlands, and the proximity to the Gulf of Mexico. Fortunately for the State, these have combined to give Alabama a comparatively uniform climate, with no great extremes in the temperature. It is true the summers are long, but they are seldom oppressive. The nights are fairly cool. The average temperature for the State is 63 degrees Fahrenheit, with 61 degrees in the north and 65 degrees in the south. The average summer maximum temperature is 90 degrees, while the average winter minimum is 35 degrees.

The annual average precipitation is 51 inches; the region of least precipitation is near the center of the State, where it is 48 inches. The greatest is along the coast, where in places it reaches as high as 63 inches. The coast line is visited by occasional destructive subtropical storms, while the central section of the State is liable to drouthy conditions, most likely to occur between May and November.

Occupations of the people.—Alabama is preeminently an agricultural State, notwithstanding the fact that it contains a rapidly growing industrial section, centering about Birmingham. It ranked eighteenth among the 48 States as regards population both in 1910 and 1900. In 1910 the density of population for the entire State was 41.7 per square mile, the corresponding figure for 1900 being 35.7. The population is mostly rural. In 1910, of the entire population, 17.3 per cent resided in incorporated cities and towns with a population of 2,500 and over; in 1900 only 11.3 per cent.

Birmingham is the one great industrial city of the State; Mobile and Montgomery are the only other cities having above 25,000 population. Anniston, Bessemer, Gadsden, and Selma are other cities having more than 10,000 population in 1910; since that time Tuscaloosa has likewise reached this population. These cities contain about 14 of the total 17.3 per cent urban population in the State.

The census of 1910 places the whole number of farm operators at 262,901 persons. This includes owners operating farms, as well as tenants and renters. Persons engaged in manufacturing come second, with 81,972 persons. This group includes both salaried officials and wage-earners. Mining of coal and iron and quarrying of limestone and marble engage about 32,000 persons.

The agricultural system.—The land surface of Alabama is 32,818,568 acres. Of this area 21,732,312 acres are rated as tillable. But of this amount not more than 9,000,000 acres have been cleared, and of this area again only about 8,000,000 acres have been kept open for cultivation. Indeed, fully 62 per cent of the State's tillable lands are not now under the plow, and of the acreage that is utilized much needs draining and terracing before it can be farmed effectively. The State has not yet emerged fully from the old "land economy" period of agriculture, which in the South was marked by the old plantation system of owners, overseers, and slave land tillers. Since the reconstruction period the system has suffered largely from absentee landlordism and tenant farming. The large plantations are gradually, however, being reduced in size and the number of operators is increasing accordingly. In 1910 there were 262,901 operators of all kinds; of these, 103,929 were classed as owners, 646 as managers, and 158,326, or 60.2 per cent of all, as tenants, known variously as share tenants, share-cash tenants, and cash tenants.

The old system of farming has proved economically unsound. The colored tenants have made no headway. In ordinary years they are "carried" by the landowner, the overseer, or local merchants until the crops are made. If the crops are good both owner and tenant have a fair margin. But in exceptional times—such as the last five or six years—the system has been breaking down. The low cotton prices in 1913–14 made the beginning of the break; it was aided by the boll-weevil plague and the destructive flood in 1916. This seeming calamity was probably the most fortunate thing that could have happened. Because of it the one-crop system is now yielding to diversified farming. Cotton culture has been reduced to 55 per cent of what it was four years ago. This reduction has been more than made up in value by increasing crops of corn, alfalfa, hay, velvet beans, peanuts, and raising better live stock. Because of shortage in labor many plantations are being turned into dairy or stock farms; alfalfa and cowpeas are produced in increasing acreage to provide fodder and to supply humus and nitrogen for the land. Pure-bred stock, both dairying and beef types, have been introduced from the North. This has revolutionized the live-stock industry and has actually doubled the number of cattle in the State in three years' time. An era of scientific agriculture is apparently about to take its beginning in the State.

Growth in manufacturing industries.—No State is more fortunately situated in regard to urban industries than is Alabama. The Birmingham district is rich in bituminous coal and iron ore; and the limestone necessary for fluxing the iron is abundant in the same region. The Coosa-Alabama River system affords unlimited power possibilities, and the raw cotton is produced within easy reach of the cotton mills. In 1879 only 10,000 wage earners were employed in manufactures in the State; by 1910 this group of workers had reached about 83,000. The total value of manufactured products increased during this time from $13,566,000 to $145,962,000, or more than tenfold. The growth in manufacturing has been so tremendous as almost to overshadow for the time being, in the minds of many, what must always continue to hold the first place in the State's activities—i. e., agriculture.

Population: Its increase and distribution.—In 1910 the total population of the State was 2,138,093. In 1917 it is estimated at 2,363,989. There has been a steady increase since the first census was taken in 1820. From 1900 to 1910 the increase was 16.9 per cent. In density the population varies greatly. The population of the counties varies from 12,855 in Winston County to 226,476 in Jefferson County, the latter embracing the industrial center of Birmingham, which alone contributes 6.2 per cent of the total population of the State. Alabama has 36 cities, as defined by the United States Census Bureau, and 46 cities according to the State definition, which counts as cities all incorporated places of 2,000 population and upward.

In common with most States, Alabama has shown a gradual decline in the percentage growth in rural population as compared with the growth in urban population. In 1890 the former represented 89.9 per cent of the total, and in 1900, 88.1 per cent, with the still greater decline, 82.7 per cent in 1910. However, on the basis of aggregate growth, the rural population increased during the decade 1900–1910 by 406,496 people, while the cities added only 218,196.

Racial composition and characteristics of the population.—Alabama offers no great social or economic problem so far as the white race is concerned. Of the white population now in the State, 84.1 per cent were born there. The others have come, in the main, from Georgia, Tennessee, Mississippi, and other South Central and South Atlantic States. In 1910 there were only 51,373 persons of foreign birth in the State. This solidarity and lack of influx in population has to a degree deprived the State of the advantages that accrue from a wholesale mingling of population from section to section. The native white population is made up chiefly of descendants of the early colonials of good Anglo-Saxon, Scotch, Irish, and Huguenot ancestry.

The colored race.—In 1910, of the whole population, 908,282 persons, or 42½ per cent, were negroes. It constitutes 75 per cent or over in 11 counties in the so-called black belt, while in 10 of the mountain counties the percentage of negro population is negligible.

Like other Southern States, Alabama has the problem of two races. The negroes form a vital part of southern life, and have both aided and hindered its development. They are largely a landless population, largely improvident, and poor, so that the slightest economic pressure is likely to set in motion a negro movement of some dimensions.

Such a movement has been going on since 1916. The boll weevil and the great floods of that year had impoverished the colored population and made them eager to respond to the great labor call from the North due to the war. During the summer of 1916 the negroes began leaving the State in such numbers as to constitute a real migration. By the middle of 1917, according to the best estimates, 75,000 persons, or 8.3 per cent of the total negro population, had abandoned the State. Since that time the movement has slackened, but it has by no means yet come to an end.

The heaviest losses have naturally been in black-belt territory. Of the 11 black-belt counties which in 1910 had a negro population amounting to 75 per cent or more of the total population, "eight form a section extending from Montgomery County westward to the State of Mississippi. These are Dallas, Green, Hale, Lowndes, Marengo, Perry, Sumter, and Wilcox. The remaining three, Bullock, Macon, and Russell, connect Montgomery County with the State of Georgia to the east. It is from these counties that negroes have gone literally by the thousands. Some of the counties have lost 25 per cent or more of their total negro population within the past 18 months."[1]

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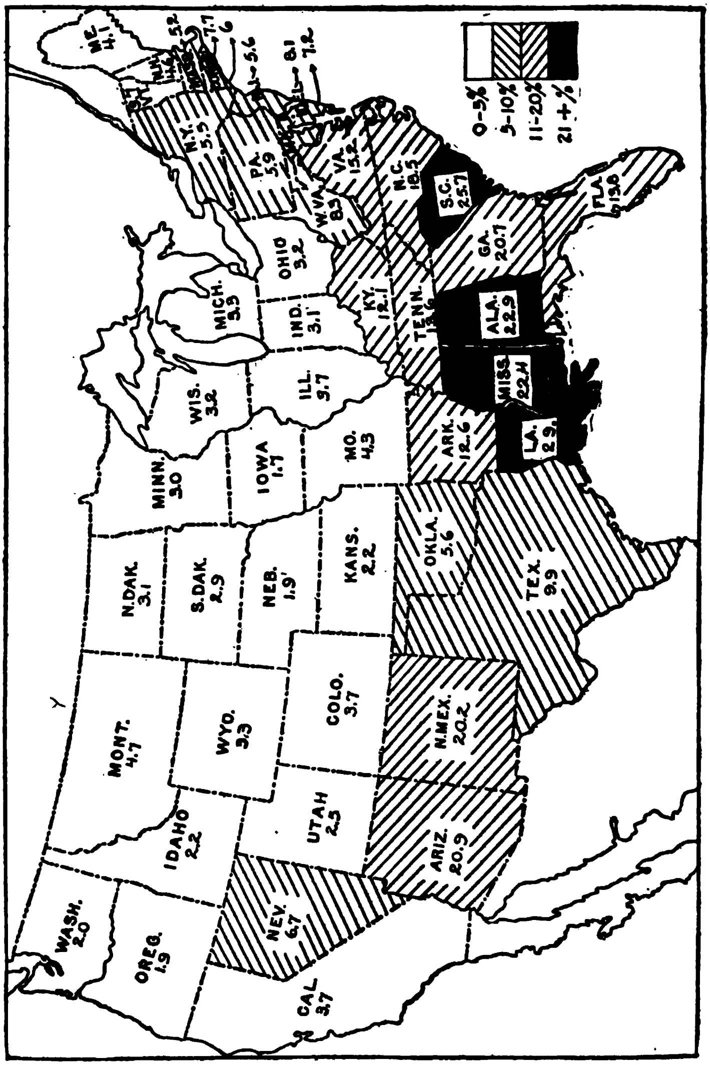
[1] Negro Migration in 1916–17, U. S. Department of Labor Bulletin, 1919, p. 56.

While the immediate causes of the migration were economic, much of it can also be explained in a desire for social betterment, and particularly for improved educational advantages.

Prevalence of illiteracy.—In 1910 Alabama ranked forty-sixth in the United States in adult illiteracy. Two States only—South Carolina and Louisiana—ranked lower. The accompanying map shows that 22.9 per cent of the entire population above 10 years of age were classed as illiterates. By far the larger per cent of these illiterates are colored, it is true; but the percentage is alarmingly large among the white population also.



TOTAL ILLITERACY, 1910

This map contains the per cent of adult illiteracy—persons above 10 years of age—on the basis of total population, according to the census of 1910.

At the present time (biennial school census, 1918) there are in the State an aggregate of 334,559 white children between the ages of 10 and 20, inclusive. Of this number, 311,108 were returned by the census as literate and 23,451 as illiterate. Similar ages for 1914 gave an aggregate of 306,857, of which number 280,598 were classed as literate and 26,259 as illiterate. That is to say, one white child in every 14 in 1918 approximately three years above compulsory attendance age had not yet learned to read and write; for 1914 the ratio was even worse, being one in every 12.

Conditions among the colored children are much worse. In 1918 there were 226,732 colored children from the ages of 10 to 20, inclusive. Of these, 161,986 were classed as literate and 64,746 as illiterate; corresponding ages for 1914 gave an aggregate of 240,814 colored children, of whom 170,567 were classed as literate and 70,246 as illiterate. In other words, one out of every three colored children in 1914 who should have been in school for upward of three years could neither read nor write. In 1918 the ratio was still one to three.

These figures consider only the children of school age, and bear direct witness that the public-school facilities of the State are quite inadequate and the compulsory law only poorly enforced. It proves also that the State must invest much more in education than it has done, and must equalize the investment better between the races than it has done, if this unfortunate condition is to be remedied in the near future.

In the population beyond school age the illiterates are by no means limited to the older people who are beginning to pass away; it is quite prevalent among the very youth who have the destiny of the future in their hands. This is evidenced by the astonishing disclosures in the registration under the recent selective draft. Alabama had approximately 10,000 young men of draft age wholly illiterate in a total registration of 172,727, or one in each 17 persons.

How the wealth of the State is utilized for education.—Alabama is potentially a rich State. The actual accumulated wealth is, however, not so great as might be expected. Nor is this wealth well distributed. The mass of the Negro population is poor and landless and of little tax ability. Great wealth is exceptional and of recent origin, and is limited in the main to the industrial regions. The large planters have been kept "land poor" by the indifferent system of one-crop farming, but in spite of this some of them have become wealthy by holding their lands for the unearned increment. On the other hand, it must not be assumed that Alabama is unable to support well a modern system of public schools. The State has not in past years utilized its resources so fully or so effectively as it should have done, all of which is shown clearly in following chapters of this report. The State has the ability to do vastly more than it has done.

The crux of the whole matter is how to readjust the State's unsatisfactory tax system; how to equalize taxes among the rich and poor; and how to enforce the revenue code fairly over the State?

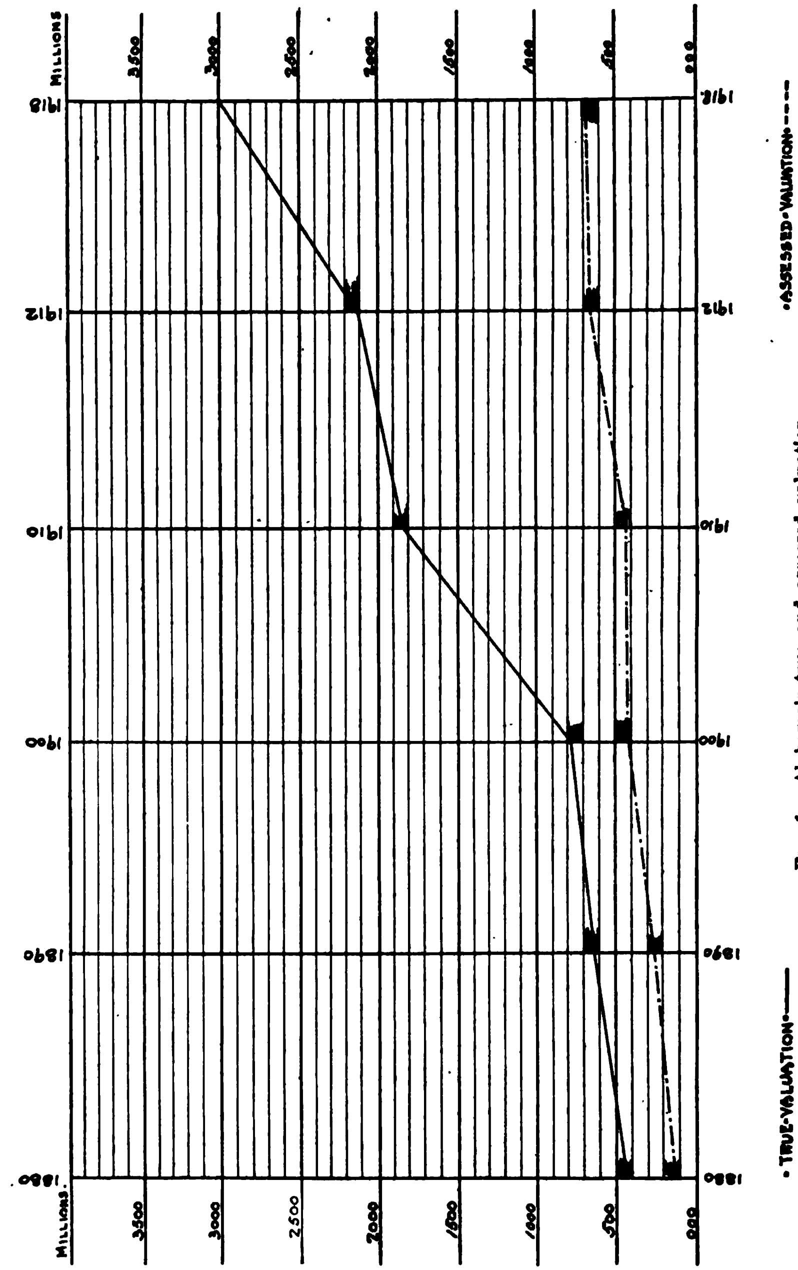


FIG. 1.—Alabama's true and assessed valuation.

Figure 1 shows graphically the increase in the State's actual property valuation and its assessed valuation. A glance at the figure indicates that the total resources have increased satisfactorily for several decades, and especially so since 1910. It is, in fact, rapidly outstripping the growth in population. But the *assessed valuation has not increased in the same proportion.* At no time since 1880 has the assessed valuation reached the required "60 per cent of its fair and reasonable cash value," and *at the present time (1919) it is scarcely more than one-third of the legal requirement.* (See Chapter XXIV.)

The average wealth per inhabitant in the State is $1,250, on a fair basis valuation. On this basis the total resources available for each child in the State 5 to 18 years of age (the normal attendance age), would be about $4,000 as against $894 per child on the present assessed valuation. This means that if the property were assessed at 60 per cent of its real value the present tax rates would produce more than $24 for the education of each child (5 to 18 years) instead of the present amount of less than $7.

That Alabama has the ability to invest much more in education than it has done in the past goes unchallenged. The State went over the top gloriously in all its war finance activities, subscribing more than $30,000,000 alone for the fourth Liberty loan. Alabama has paid Federal taxes in increasing volume, from $463,000 in 1914 to $19,132,000 in 1918, with an estimated tax of $30,000,000 for 1919. It is reasonable to assume that when the people of Alabama begin to realize the seriousness of the prevailing conditions in their schools, because of the present inadequate financial support, they will "go over the top" as cheerfully in their efforts to make democracy safe through the best type of education as they did when the foundations of this democracy were threatened by a foreign enemy.

CHAPTER II.

FUNDAMENTAL EDUCATIONAL NEEDS AS INDICATED BY CHARACTER AND RESOURCES OF ALABAMA.

Any effective system of education must take hold on the life of the people for whom it is designed, and must be such as to make them intelligent about the life they live, the work they do, the social and political units of which they are a part, the forces and laws of the universe with which they constantly deal and on an understanding of which their welfare and life may depend. The educational system of a democracy must insure to all full, free, and equal opportunity for that kind and degree of education that will develop most completely the native ability of each and the highest degree of manhood of all, with the fullest possible measure of the sweetness and light which we call culture. It must prepare for life, for making a living by some form of useful, intelligent, and skillful work, and for the duties and responsibilities of citizenship. It should include body, mind, and soul. Its aim should be individual happiness and social welfare. Its justification is the service of intelligence and good will which results in material wealth, social purity, civic righteousness, and political stability and power. For its support, therefore, it has first and indisputable claim on all the resources of the State and all the wealth of the people. The principles involved in such education are universal, but their application is dependent on local environment and historical conditions.

Being an organism and not an artificial creation out of hand, a system of education can be improved by wise and thoughtful development rather than by destructive criticism and rash attempts toward radical revolution. Yet it must be quick to respond to the new and changing needs of the people it serves, and those who direct its development must be keen both to understand the present and discern the needs of the future. In making the recommendations included in this report it is assumed that these principles are understood by the people of Alabama and their representatives in State, city, and county councils.

In abundance and variety of natural resources and in possibilities of material wealth, Alabama ranks very high. Some day the State will be the home of many millions of people, rich and progressive beyond all present compare. In area Alabama is as large as England, with her population of thirty-five millions. Its soil and climate are adapted to a very wide range of profitable agriculture, including all or most of the staple crops of the United States—cotton, corn, wheat, rye, oats, grasses, clovers, beans and other legumes, white and sweet potatoes, sorghum and sugar cane, and all the fruits, nuts, berries, and vegetables common to temperate and semitropical climates. Wind currents and rainfall are such that excessive floods and droughts, and consequent destruction and failures of crops, are impossible. The forest wealth is great, and, under proper care, constantly and rapidly renews itself. According to the present estimates of the United States Geological Survey there are in the coal measures of the State seventy billion tons of coal—enough to supply the world at its present rate of consumption for a hundred years—and a billion and a half tons of iron ore of high grade. Last year the State supplied two-thirds of the graphite produced in the United States and its possessions. Marble, limestone, clays, and other building materials are found in quantities sufficient to furnish the home supply for all time and for export to neighboring States. The water power, when fully developed, with a possible thousands of millions of horse-power hours, will be sufficient to supply the needs of industries employing millions of workers. Stretching north and south from the rim of the middle Tennessee basin to the Gulf, halfway between the Atlantic Ocean and the Mississippi River, Alabama lies athwart the path of all the roads from the northeast to the southwest and the northwest to the southeast, and is therefore assured of easy access to markets in every direction. Fifteen hundred miles of navigable rivers and a great harbor looking out over the Gulf toward Mexico, the West Indies, South America, and the Panama Canal will, when fully developed, give her cheap transportation and easy access to the markets of the world. The industrial possibilities of the State are indicated by the fact that coking coal, soft iron ore, and lime for flux are found in the same hills, these hills being clothed with forests of valuable timber, and that, as nowhere else in the world, the cotton mill and the steel mill stand side by side in the same industrial town, and both obtain all their raw materials from the country immediately surrounding them.

A rich and rare array of material resources is this, but capable of full development and use only by an equally wide range of intelligence, scientific knowledge, and technical skill. Through the very nature of her resources, Alabama calls aloud for a well-devised, liberal, and well-supported system of practical and vocational education for the great masses of her people, both white and colored. Nowhere will such education yield a richer material reward or the want of it bring more disastrous results.

Education for agriculture and rural life.—Agriculture has been, is, and no doubt will long remain the occupation and source of support and wealth for a very large part of the people of Alabama. Were the State a one-crop State, limited in possibilities by soil and climatic conditions to a very few crops closely related in nature and in methods of cultivation and harvesting, but growing abundantly in a virgin soil not needing drainage to make it productive or care and skill to save it from erosion and depletion, Alabama's problems of agriculture would be fewer and simpler than they are. Effective methods of cultivation might then be acquired principally by tradition, and this part of the life of the State would depend somewhat less on the work of the schools than it now does. The same would be true if farming were carried on under a feudal system, or under conditions that would permit a few intelligent and well-trained men to direct the work of the many, who would then need only to follow faithfully the directions given by their leaders. But the conditions are, as already shown, far different, and the folly of attempting to carry on the State's chief industry without educational preparation for it has been sufficiently demonstrated.

With all its rich possibilities Alabama is still in practice, especially in its most fertile sections, largely a one-crop State. In a section in which every acre might with proper drainage be made productive, on which the most modern lavor-saving machinery might be used without obstacles of stones or hillsides, which would produce abundant harvests of corn and small grains, clovers, grasses, beans, peanuts, and potatoes, and which has been shown to be well adapted to profitable live-stock growing, white and colored farmers, land owners and tenants, cultivate only a small fraction of the land, for the most part with the simplest implements and tools, with little or no use of modern labor-saving machinery or of steam, gasoline, or electric power, growing a crop the amount of which is strictly limited to the possibilities of the use of the hoe in an essential part of its cultivation and the sole use of the fingers of the human hand in its harvesting. Since no part of this crop can be used for either food, clothing, or shelter, or for any other purpose until it has undergone a long process of manufacture requiring complex machinery and large investments of capital, and since no other crops are grown in sufficient quantity to supply these needs, it must all be sold by the farmers for whatever price is offered at the time they must sell. Any crop so produced and so marketed must, except under abnormal conditions, be sold at a price only sufficient to insure a continuance of its production. Those who buy and sell and manufacture it make all the profits, and those who grow it and sell it in its raw state will pay to others the profits on all the things they buy for their meager support.

So agricultural Alabama has not grown rich and can not until conditions are changed radically. Only 1 acre in 4 being cultivated and productive, the hard-earned profits of this fourth acre must carry the burden of taxation not only for itself, but for the 3 nonproductive acres also, unless the taxes on the fourth acre are reduced to an amount no larger than the 1 productive acre should pay. So the State as a whole does not grow rich from its agricultural lands, nor can it ever do so until its agricultural people, white and colored, are so instructed and trained that they can and will, under their own initiative and direction, as American farmers must, make better and fuller use of the great and varied agricultural possibilities.

All this means that the State of Alabama must, at whatever cost may be necessary, at the peril of falling relatively further behind in agriculture than it now is, establish and maintain schools for all its rural people, not only through the primary grades but at least through the years of the junior high school and for as many as possible—the more the better—through the senior high school also. The courses of study in these schools must be given a rich agricultural content, growing out of the life and work of the people and turning back into these a large amount of scientific knowledge and practical skill.

The teachers of these schools must be educated and trained for the work of instruction in the subjects of agriculture and rural home making and for wise and effective leadership in the rural communities in which they teach, and they must be paid such wages as will induce the best of them to remain until and after they have gained the professional knowledge, skill, and power that come only from successful experience. Schools must be so consolidated and so equipped as will enable teachers and pupils to do their best work. A healthy public sentiment and well-administered attendance laws must insure the regular and prompt attendance of the children of school age, and no parent or guardian, however ignorant, careless, or avaricious, must be permitted to rob any child of the opportunity which the State provides for its education and to cheat the State out of the profits which would come to it from the full and right education of the child. Junior and senior high schools in open country, villages, and towns must teach the possibilities of agriculture in Alabama by experimental and demonstration plats and farms and through well-directed home projects. Special agricultural schools with adequate support must offer at lowest possible cost for board and lodging practical instruction in agriculture and home making for those boys and girls who have passed the high-school age without acquiring the general education necessary to enable them to enter the ordinary high school, or who for other reasons can profit more by attendance at these agricultural schools than by attendance at other schools. The

College of Agriculture of the Polytechnic Institute should so increase its equipment for teaching agriculture and so diversify this work that it may be able to educate and train large numbers of leaders and directors in all kinds and phases of agriculture which may be profitably developed within the State—men of knowledge, skill, and vision to see and to understand, to promote and to develop. This school must also train women for equal leadership in developing and improving the home life of the State and in the economic use of that which the State produces or imports for the home.

Industrial education.—The products of the field, of the forests, and the mines of the State may continue to be sold at low prices as raw material or in a low state of manufacture in which the cost of material is the principal element, and labor and skill and taste only minor elements; or they may be changed into products in which skill, labor, inventive ingenuity, and cultivated, productive taste count for much more than raw material and multiply original values many times. Whether the one or the other thing shall take place will depend not so much on capital, which is mobile and which flows readily to those places where abundant raw material and skill and energy exist, and which with a little help is quickly created by these, but rather on the education which the State shall provide for its people in its cities and industrial centers. There is abundant proof that skill and desire and energy and understanding, all the result of education, will attract to the place where they are found both capital and raw material, enhancing the value of both.

Abundance and variety of raw material and of the sources of power, mildness of climate, and cheapness of living all mark Alabama, and especially the part of it above the line of falls, as the proper home of large and varied industries in textiles, woods, and metals; but these are as yet hardly more developed than is the agriculture of the State, and for the same reason. For industrial knowledge and skill the State has relied almost wholly on the outside world and has been content with furnishing its share in unskilled labor at the low price of unskilled labor when there has been a demand for it, and only to the extent of the demand created by those educated and trained elsewhere. As a result the industries of the State have not benefited its own people as they might have done.

The remedy is industrial and technical education in elementary and high schools—all-day schools, part-time schools, and evening schools—in all the actual and potential industrial communities of the State, and in the fuller development of courses in all phases of engineering in the State University and Polytechnic Institute. The large industrial cities must sooner or later establish and maintain technical schools of secondary and higher grade. For the present the courses of study in the city schools need to be enriched with a larger content of the sciences of chemistry and physics and their practical applications in the shop and mill. Courses in designing for textiles, wood, leather, brass, iron, steel, and stone should be provided. All junior and senior high schools should be equipped with laboratories and shops. Courses of study should be lengthened to the full 12 years, common in the cities of most of the States, to give time for the new and additional work thus required.

In the cities and industrial centers, as in the country, standards of requirements for teachers should be raised. Their preparation should be made more definite, and the wages paid them should be made such as will hold the best in the service of the schools.

For men and women in the industries, who have passed the high-school age, and for those who must go to work before completing the high school, ample opportunity for further instruction must be offered in evening and part-time schools, either at the schoolhouses or in the plants where they are employed. Wherever given, this instruction should be free and under the direction of the public-school authorities as a part of the system of public education.

Health and physical education.—No amount of mental education can make a people efficient, prosperous, and happy if physical development is neglected; nor can any amount of material wealth compensate for lack of health. The warm climate of Alabama, the sluggishness of its streams in their lower courses, and the marshy character of much of the land, yet undrained, give rise to many diseases unknown in other climates and increase the prevalence of others. A recent health survey of the State revealed the fact that an average of approximately one-quarter of all the people are sick all the time. More than a third of the young men examined for admission to the Army were found unfit for full military service. These facts indicate a very large and unnecesary amount of suffering and an equally great loss in productive power. Men unfit for military service are also, to an extent at least, unfit for productive labor. If 500,000 people are sick all the time, as revealed by the health survey referred to, we have some basis for a rough calculation of the cost. Let us suppose only one-half of these are of producing age, a very low estimate, and that the productive power of these would average only $500 a year if they were well—again a low estimate. We have thus a loss of $125,000,000 a year in the productive power of this State. Add to this the loss of the time of those who care for the sick and the loss through reduced efficiency of those who have been sick, even after they are counted as well, and to these add the loss through the low rate of efficiency of the hundreds of thousands who have not been fully developed physically and are therefore lacking in strength, hardihood, and control of body, and the $125,000,000 may well be doubled. A loss too large is this for a State like Alabama to continue to bear, if it can be avoided. And much of it can be avoided. Most of the diseases from which the people of Alabama, and especially the people of the open country and rural villages and towns, suffer are easily preventable, and the open climate, the possibilities of outdoor life, and the great variety and abundance of foods that can be made available, all should contribute to the better health of the people. All that is needed is good sanitary engineering everywhere, a wide knowledge of preventive medicine on the part of all physicians, a proper care for the health of children in school and home, instruction in regard to diet, and the elementary principles of health, the establishment of right health habits, and such physical education and training as will contribute to health in the Alabama climate and make for strength and bodily control. Such care, instruction, and training should be made an essential part of the work of all schools and the Polytechnic Institute, Girls' Technical Institute, and the university, with its school of medicine, should train sanitary engineers, teachers of health and physical training, and physicians in sufficient number to supply all the needs of the State.

Commercial education.—Until quite recently the commerce of Alabama was very simple and rudimental; and even now, despite the magnificent harbor at Mobile, it is almost wholly domestic. There has been, therefore, little demand for commercial education and for the preparation of stenographers, typewriters, clerks, and office secretaries. But with the improvement of agriculture and the development of industries in Alabama and the beginning of the new commercial era of the United States a large increase in the commercial and business life of the State may be expected. The advantages of the port of Mobile for Latin American trade should add a considerable element of foreign commerce. This will call for business and commercial courses in the high schools, especially in the cities, and for a school of commerce at the State university. Since this kind of education is for the public welfare and the service of the States as organized society, it should be supported by the public as freely as agricultural and industrial education.

Education for citizenship.—All forms of right education are in a very real sense education for citizenship, since they contribute to self-support, efficiency, public service, clean and healthy living, and a right understanding of one's place in society and in the economy of the State. But in a democracy like that of Alabama it should be counted an inalienable right of children to have such instruction and training in the things pertaining more directly to civic and political life as will enable them, when grown to manhood and womanhood, to assume the responsibilities of citizenship understandingly and perform the duties thereof intelligently, with good will, and effectively. In Alabama most or all of the problems of civic and political life and the responsibilities and duties of citizenship common to other democratic States exist in greater or less degree. Many of these are complicated and made more difficult and new ones are created by the fact that here two races, widely different in origin, nature, development, and traditions, live side by side on the same soil and under a form of government which requires equal rights before the law for all, without regard to racial or other conditions. It is therefore doubly important that the schools of this State should provide proper instruction and training in those things relating directly to civic and political life. Lack of education in these things might prove fatal at any time.

Teachers.—For such schools as Alabama must maintain and for such education as the public welfare requires to be given in these schools, teachers of the best ability will be needed. The highest interests of the State require that the teachers of the children of the State, white and colored, in schools of all grades, in city and country, shall be men and women of good native ability, good general education, and possessed of the professional knowledge and skill necessary for success in this highest and most difficult of all work. Possibly a democracy has no higher function than that of selecting and placing and keeping in the schools such teachers. So long as Alabama undertakes to run its schools and educate its children with teachers having no better education and training than the majority of the teachers of the State now have, it must be doomed to disappointment. The State and its responsible officers must remember that if there be good reason why the children of one community should be given teachers of good native ability, well educated and well trained, so that the money, time, and opportunity of the children may be used to good advantage, there is equal reason why the children of any and all other communities should be given teachers of no less ability. It is recommended in this report that the four class "A" normal schools for white people and the normal school for colored people shall be more fully developed, and that within the next four years the State appropriation for their support shall be increased to $35,000 for each school. But it should not be supposed that these schools thus supported will ever be able to furnish an adequate supply of teachers for the schools of the State. Alabama must expect to spend not less than a half million dollars a year on normal schools before the supply of adequately prepared teachers will be sufficient to meet the needs. Until something like this is done, the work of many of the schools must continue to be unsatisfactory. Money spent for the preparation of teachers may well be considered as an insurance fund, protecting the public against loss of the money otherwise invested in the schools as well as against loss of the time of the children and the opportunity which the schools are supposed to offer them, and which, once lost, is lost irrevocably.

Education for individual culture, social purity, and idealism.—In urging education for production and citizenship, the survey commission would not be understood as having sympathy with any theory of education or of social economy which would make of any class of the people merely good working cattle or industrial machines, however effective, to be cast aside when better can be made of wood or steel. Nor does it understand that the performance of civic and political functions, however intelligent and wise, is the highest expression of human life, or the proper preparation therefor the most important thing in education. The development of the mind, the training of the powers of observation and reason, the cultivation of the imagination, the purification of the heart, the formation of the will, the things that make for that indefinable something called "good breeding," are still more important. Of the value of this element of education, however, the people and the schools of Alabama have had a fuller appreciation than they have had of other elements. In their aristocracy of education it has held a high place. Unfortunately, it has been the heritage of too few, and has too often lacked the accompanying strength and practical efficiency of other elements. It is to be hoped that all that was best in the old education, designed for the few, may be saved as a transforming and refining element in the more democratic education of all. So long as the roots of the present and the future hold in the past there is good reason to believe that it will be so.

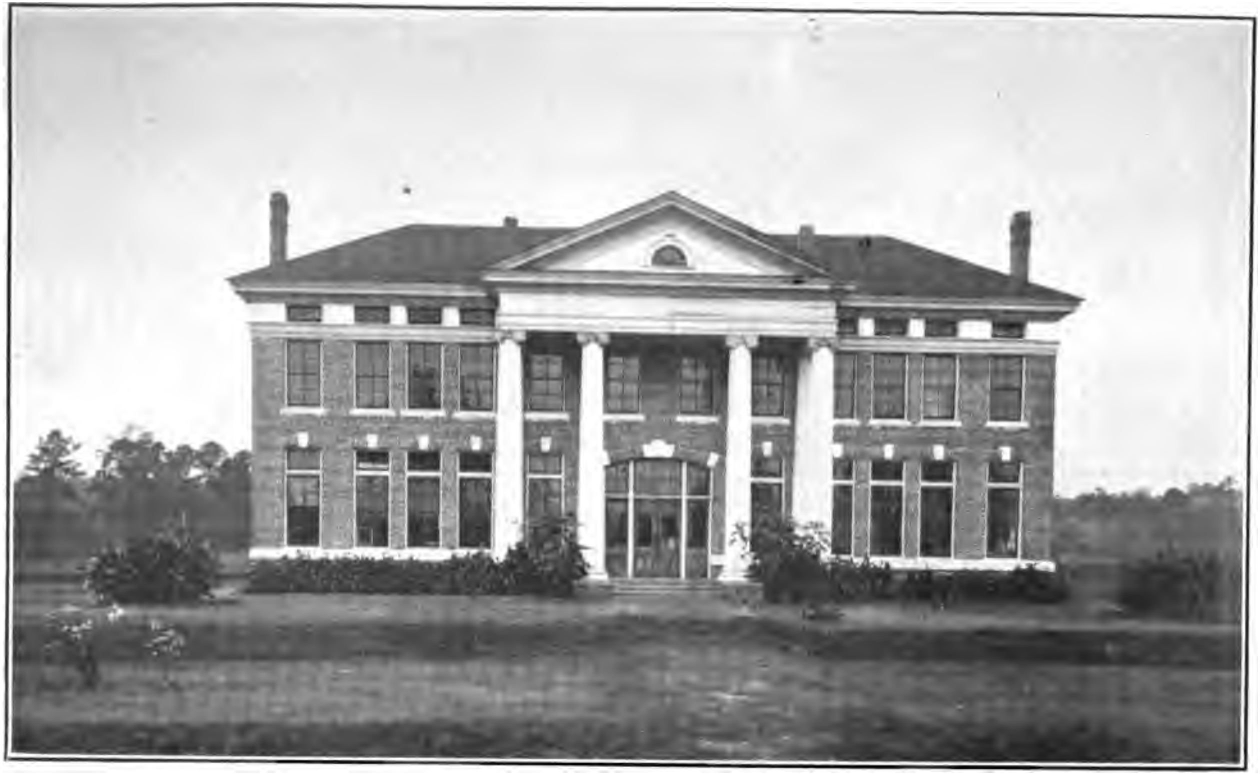
The education of all the people.—In writing this prevision of what education in Alabama should be and in making recommendations for the improvement and development of the State's system of public schools, it is remembered that the population of Alabama is made up of two races, differing in many other respects as widely as they differ in complexion, and that fully 40 per cent of the people are of African descent, former slaves or the children and grandchildren of those who were slaves only a little more than half a century ago. The difficulties and cost of maintaining a double system of schools for two races and the prejudices against the education of Negroes, which is still strong in the minds of many of the good people of the State, have not been forgotten. Nevertheless, the committee unhesitatingly recommends that the State and its local communities undertake the task of the fullest and best possible education of all its people of both races, and assume the burden and responsibility of providing adequate schools for all the children of both. The interests of each race depend to a very large extent upon the education of the other, and the welfare of the State depends on the education of both. This is the more easily seen when it is understood that education is not alone or chiefly for the profit of the individual educated, but for the service of society, State, and Nation; for the increase of material wealth, for safety from disease and crime, for civic righteousness, and the fuller attainment of the higher ideals. Alabama can never be as rich, as strong, as free from disease and crime as she might and should be, and can never begin to attain the ideals long held by a large majority of the best of her people so long as the 40 per cent of her population which is colored are condemned to poverty, weakness, disease, crime, superstition, and low ideals, through ignorance and lack of proper education and training. However much one may wish it were otherwise, the two races in Alabama are bound up in the sheaf of life together. Their destinies are inextricably intertwined. Neither can rise or fall without affecting the other for good or ill. Industrial and agricultural efficiency and commercial prosperity require the education of all. Ignorant white farmers are an incubus upon the agricultural development of any State. So, also, are ignorant Negro farmers. Unskilled and inefficient white workmen retard industrial development. So do unskilled and inefficient Negro workmen.

The ideals of Alabama demand absolutely that the two races be educated separately. Along with this should go the further demand that each race be educated in the way that will develop the particular kind of efficiency of which it is most capable, and which will assure its own happiness and welfare and its highest possible service to society, State, and Nation. This is due not only to the State as a whole, but the highest welfare of each race depends on it. There is no conflict of interest here. The prosperity of the people of either race in Alabama demands that there be the fullest and best education of the people of the other race as well as of its own. If either race is inferior in the things necessary to the welfare of the State, material, civic, or spiritual, it should have special help in making up this deficiency. If either has possibilities beyond the other for service in any particular field, these possibilities should be fully developed for the good of both races and of the State. This does not mean social equality or social mixing. The figure of speech, wise as eloquent, used by Booker T. Washington in his Atlanta Exposition address many years ago, still holds and shall hold: "In all things purely social, separate as the fingers, yet one as the hand in all things essential to mutual progress." Not by keeping Negroes from acquiring education can the white race retain its place of leadership, but by directing the ignorant Negroes aright and preparing them to become industrious and clean members of society.

It will no doubt finally cost approximately as much in proportion to numbers to educate the children of one race as it will to educate the children of the other. If, through native ability, the children of one race respond more readily to the processes of education and profit more by them, the very lack of equal ability in the children of the other race may well be accepted as an indication of greater need for all that education can do for them. Toward greater equality in education and in expenditures on the schools of the two races the State should, and no doubt will, move as rapidly as conditions will permit.

The survey committee fully understands that such a program of education as is outlined in this report can not be put into full operation at once, but it hopes that it will so commend itself to the good sense of the people of Alabama that they will within a few years adopt all that is most essential in it and finally go far beyond its formal recommendations.

To provide adequate means of education for all the people of the State will cost much money, and the State is still comparatively poor. But the people of Alabama surely have not forgotten the cry of her great son, whom they have since honored by placing his statue in the Capitol at Washington: "We are too poor not to educate," and his oft-repeated argument to show that only through education can the State and its people ever grow rich. Nor should they need to be reminded of his declaration that in a democracy every dollar of wealth is under first mortgage for the education of all the children of all the people. Since Curry lived and pleaded with the people of Alabama and other States of the South to make education their first interest and to maintain their schools despite their poverty, these States, and Alabama among them, have emerged from their 40 years of wandering in the wilderness of poverty and uncertainty. They have taken new courage and are now beginning to claim for their children opportunities of education as good as the best and to feel that they are able to do for them whatsoever they will. Not Curry alone, but most of the greatest and best of the leaders of the State, have understood and urged the importance of adequate education for all the people at the public expense. In her new-found strength, Alabama may well heed the advice of her leaders whom she has delighted to honor.



A HIGH-SCHOOL BUILDING OF THE BETTER TYPE—DALLAS COUNTY HIGH SCHOOL.

A. TYPICAL HOME OF AN ALABAMA "SMALL FARMER."

B. TYPICAL NEGRO CABIN IN ALABAMA.

A. ROADS LIKE THIS GO HAND IN HAND WITH POOR SCHOOLS.

B. THE PREVAILING CROP OF THE "BLACK BELT;" ON A GOOD ROAD.

A. A COLORED SCHOOL UNUSUALLY WELL CONSTRUCTED.

B. A WHITE SCHOOL OF THE BETTER TYPE IN COVINGTON COUNTY.

Chapter III.

HISTORY OF PUBLIC EDUCATION IN ALABAMA.

Early backgrounds.—A study of the development of the Alabama school system is at once disappointing and reassuring—disappointing because of the numerous failures that might have been averted and the many promising beginnings that attained little success; reassuring because of the high points here and there reached, the absence generally of any considerable retrograde movement, and the presence in every period of at least a small coterie of able and far-seeing friends of public education.

Like other Southern States, Alabama followed the theory of Thomas Jefferson and developed its educational system from the top downward. The system was developed from the top downward, in fact, in a double sense, for not only was the State university established more than two decades before there was any general system of public schools, but the scheme of public school support likewise had its origin at the top—in Federal grants and State appropriations or subsidies—and for many years local taxation, either county or district, played little part in the provision of the school revenues.

The first school in what is now Alabama was established in 1779 at the boat yard on Lake Tensas not far north of Mobile.[1] Thirty-two years later, in 1811, an academy in Washington County, then a part of Mississippi Territory, was chartered by that young Commonwealth, and in 1818 St. Stephens Academy was incorporated at the old town of St. Stephens in the same county; these appear to have been the same institution. In 1812 Green Academy made its appearance at Huntsville in the Tennessee River Valley. Such were the beginnings of education in the territory, which on December 14, 1819, became the State of Alabama.

On its admission to the Union Alabama received the usual Federal grants of lands for educational purposes. These comprised the sixteenth section in each township for the endowment of the common schools and two townships, or 46,080 acres, for a "seminary of learning." Two facts in connection with the grant for the common schools are of special interest. In the early years of the State's history the funds derived from these lands constituted the only public source of revenue for the schools; no intra-State public funds were provided until after the establishment of the Mobile school system, in 1826. The variation of value of these lands and their failure to produce anything like adequate school revenue for the State as a whole, added to an improvident habit of thinking which they begot in the popular mind, gave rise to difficulties that were still to be seen or easily traced many years after the grant was made. The second notable fact is that, like other Federal grants for common-school purposes prior to the admission of Michigan, in 1837, the grant to Alabama was made, not to the State for the use alike of all the schools within its borders, but to the several townships within the State. Granted in this way, the sixteenth section became in each case the property of the township in which it was situated, though the State was made the trustee. Obviously the Government's policy pursued after 1837 was preferable to that of giving land to the township as was done in Alabama. For naturally the best lands were the first to be settled and soon became the homes of the wealthiest part of the population, and in consequence the more valuable school endowments were in the wealthier communities. The Government's gift was therefore most bountiful where least needed and most niggardly where the needs were greatest. This condition, which only added to the self-sufficiency of the well-to-do communities, particularly in the Black Belt, and its companion evil, the aversion of the well-to-do to the free school, which was thought of only as an institution for "indigent persons," were bulky obstacles in the way of the public-school movement in the State.

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[1] Pickett's Alabama, Owen's ed., p. 469.

It seems safe to assume that such schools as existed in Virginia, the Carolinas, Georgia, and Tennessee, from which emigrants removed to Alabama, were carried by these emigrants to their new homes, though the Alabama school may have taken somewhat different form. Writing of life as it flourished in the town of Montgomery in the early twenties, Prof. Petrie says: "A wholesome respect, at least, was shown for learning in the prompt establishment of schools and in the advertised arrival of such sturdy books as Murray's Grammar, Webster's Speller, Watt's Psalms and Hymns, and (for lighter use) song and dream books."[1] But these were not free public schools, nor yet were they public schools in any present-day sense. They were, in a word, subscription schools. A teacher who was thought qualified was permitted to organize a school, or interested citizens of the community would make the preliminary arrangements, and the teacher was paid by means of tuition fees usually in a manner guaranteed in advance by a form of subscription. These schools, though of the nature of private institutions, soon began to be subsidized with the income of the township school lands or of the endowment derived therefrom. But in all probability there were many communities of the State in which not even this primitive type of school was organized.

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[1] George Petrie, "Montgomery the Cradle of the Confederacy." In Powell's "Historic Towns of the Southern States."

Beginnings in Mobile.—By act of January 19, 1826, the Legislature of Alabama passed the first law in the State that saw in the provision of schools a public responsibility. This act applied to Mobile County and created a board of school commissioners whose function was to "establish and regulate schools" and otherwise to promote the education of the youth of the county. Public funds were provided from such sources as land grants, certain fines and penalties, taxes on auction sales and shows, small fees on suits in court, and 25 per cent of the "ordinary county tax." From this auspicious beginning, one might expect to find that the county school commissioners organized public schools and conducted them in some degree of accord with present-day practice, but such was not the case. As a matter of fact, Alabama, even in one of its most advanced communities, was not yet ready to provide public schools.

For a quarter of a century the schools of Mobile struggled, sometimes for existence, and at other times to hold a bit of ground that had been gained, but always there was want of adequate public support and proper administration as a public enterprise. The money derived from the sources of revenue provided in the law were generally used to subsidize private institutions, the school commissioners being little more than agents for the receipt and distribution of these moneys; and Barton Academy, a public-school building erected in 1835–36, was rented to private schools and for other private purposes. There was even a proposal in 1852 to sell this academy, but the time had come now for the public school. The people, thoroughly aroused, voted overwhelmingly against the proposal to sell, and thus marked the beginning of a public-school system in fact. The schools were reorganized under a new law, and on a public basis, and the system thus inaugurated has, with improvements from time to time, continued to the present day.

The State system.—While the Mobile schools were coming through their struggle from 1826 to 1852, those of the State at large were running a somewhat parallel but even more laggard course. A law of 1819 did little more than direct that the proceeds of the sixteenth section of land be used for educational purposes, but in 1823 a somewhat clearer conception emerged in an act which provided for district trustees and the organization of schools. These schools, however, were to be supported by subscription or tuition fees in the case of parents or guardians able to pay, and the income of school lands and funds was applied to payment for the tuition of poor children. Here is seen in clear outline the old idea that a free school was for "indigent persons" only. Such as there was of public school was hybrid public and private.

No very important change in the school law was made prior to 1839. In that year the State bank and its branches were directed to pay out of their net profits $150,000 annually to the schools, and in 1840 this amount was increased to $200,000. Thus the State, in 1839, began to participate in the support of schools within its borders, but, as has too often been the case, a mere makeshift was mistaken for a sound system of support of public institutions. In 1843 the State bank, owing to its mismanagement and the long period of financial depression then prevalent, was unable longer to survive the strain, and this source of school support went out of existence. The schools now settled back to the tuition-fee basis; even the permanent funds, which included the surplus revenue fund of 1836 and were in large measure invested in the stock of the State bank or otherwise involved with its assets, were lost with the fall of that institution, though the State's resultant indebtedness to the school fund was subsequently recognized and honestly assumed. To the mistaken policy of the Federal Government in granting school lands as it did at the time Alabama was admitted, to the misconception of the people of the State in regarding these grants as practically all that was needed in financing education, and to the aversion of the well-to-do dominant class to free schools, there was now added for a time another retarding element, the discouragement that always attends the loss of money or property. And moreover, the dominant political forces now had additional excuse for doing little or nothing to promote public education.

Another cause of loss from the resources of the schools was the failure in early years of some purchasers of sixteenth-section lands to pay all of the purchase price and the failure in some cases to sell the lands at the highest market value. The low estimate which was placed on public-school resources in that day and the tendency toward neglect and mismanagement of the school lands were conducive to dishonest practice on the part of those who were willing to take much value for little or nothing paid. Nor was the legislature always blameless, for not only did it fail to enact constructive legal measures for husbanding the school endowments, but it also fell into the practice of extending by special acts the time of payments on land purchased and otherwise encouraging deliquency on the part of debtors to the school fund. It is the old story of mismanagement and tendency to dishonesty in connection with that which came as a gift and without outlay of effort by the recipient.

Through the long period of vicissitudes and difficulties which beset the schools prior to the enactment of the public-school law of 1854 there was probably no time when public education was without many friends in the State. If the educational profession is thought of, there was no State in the South which had an abler group of men. Among these were Dr. Basil Manly, president of the University of Alabama from 1837 to 1855, and one of the best-known southern educators in ante-bellum times. Associated with him at the university was a group of faithful and scholarly professors, among whom were Dr. Frederick A. P. Barnard, afterwards president of Columbia College, New York; Prof. Michael Tuomey, who made a geological survey of the State; and Prof. J. W. Mallet, F. R. S., afterwards of the University of Virgina. In the field of secondary education was Dr. Henry Tutwiler, for many years head of the Greene Springs Academy, in Greene County, and father of Julia S. Tutwiler, a distinguished Alabama educator and social worker of post-bellum times and principal of the State Normal School at Livingston from 1883 to 1913.

Nor was education without friends in other vocations, for it counted among its advocates many ministers and no inconsiderable number of leading men. The legislature early had a "committee on education," and an old chronicle[1] tells us that this committee in several years submitted "able reports," but an able report seems to have been thought sufficient by the dominant element in the legislature of the thirties and forties. In 1837 Daniel P. Bestor, a Baptist minister, entered the legislature from Greene County. He was thoroughly imbued with the educational spirit and determined, if possible, to improve the school law. Through his efforts a special committee on education was created, and he became its chairman, but another "able report" was all that he ever had to show for his pains. He retired from the legislature in disappointment, and perhaps in disgust. The Rev. Mr. Bestor was in the field too soon for positive accomplishment, but such efforts as his would presently bear fruit.

It should be said, in mitigation of the neglect of the common school by the political leaders, that there was much else to engross their attention. Between 1820 and 1850 the white population of the State increased from 85,451 to 426,514, or 499 per cent; and the number of slaves mounted up from 41,879 to 342,844, an eight-fold increase. To keep legislation abreast with the State's material growth was no small task.

The coming of the public school.—In the school of experience, as Dr. Weeks suggests,[2] Alabama was learning to keep school. By a process of empiricism the State was developing its own type of public-school system, there being little of the best educational practice to learn from near-by States.

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[1] Garrett, Public Men in Alabama.

[2] Stephen B. Weeks, History of Public School Education in Alabama, p. 43.

It was in the decade immediately preceding the Civil War that public schools in fact came into existence throughout the State. By act of February 15, 1854, the legislature provided for a State distributive school fund including a direct appropriation, a county school tax, a State superintendent of education, boards of county school commissioners, township trustees, and for the examination and certification of teachers.

The first State superintendent was William F. Perry, afterwards a general in the Confederate Army. He immediately set about the organization of the smaller administrative units, the enumeration of the children, and the general supervisory work of getting the system in motion. The legislature in 1856 amended the school law at several minor points and in one important particular. The latter embodied a provision for county superintendents of schools.

Perhaps a better understanding of the occasion of the establishment of the public-school system of Alabama may be had if the reader will turn aside for brief notice of the men, three in number, who are generally credited with the leading part in putting through the legislature the school law of 1854. In the senate the man who wielded most influence in this respect was Robert M. Patton, of Lauderdale County, and afterwards governor of the State, who was born in Russell County, southwestern Virginia, in 1809, and whose parents had removed with him to Alabama when he was still a child. His father was a native of Ireland and belonged to that sturdy stock known in this country as Scotch-Irish Presbyterian. When this fact is considered it is not hard to understand how young Patton came to be a friend of education. There were many of the Scotch-Irish stock among the settlers of north Alabama.

The chairman of the committee on education in the lower house and the man who drafted the educational bill was Alexander B. Meek, who was born in Columbia, S. C., but who, like young Patton, was brought by his parents to Alabama in his early childhood. He was graduated from the university and became a lawyer. In the administration of President Polk he resided about two years in Washington as a legal adviser in the Treasury Department. Returning to Alabama, he became United States attorney for the southern district of the State and soon thereafter established his residence in Mobile. Being a man of literary attainments and an able lawyer, and having had a period of residence at the National Capital, he was eminently fitted to assume the chairmanship of the important committee to which he was assigned and to obtain for his committee a respectful hearing.

It will be noted that Mr. Patton represented the extreme northwestern part of the State, and Mr. Meek the southern end. From Talladega County, in the north-central part, there came a young representative not yet 30 years old, who was also placed on the house committee, and who soon showed himself an able lieutenant of the chairman. This young man was Jabez Lamar Monroe Curry. Born in Georgia in 1825, he had been brought by his father to Alabama when about 12 years of age, but returned to Georgia for his college education and studied law at Harvard University. Thus, like his able chief on the committee, young Mr. Curry had come under strong extrastate influences which had no doubt given him a broader view of the meaning and function of the public school. The State was fortunate in having three such men as Patton, Meek, and Curry; it was doubly fortunate in having them in the legislature at the same time and at the same task. Before them opposition hitherto effective must now crumble.

A brief survey of the Alabama school system as it existed in the half decade immediately preceding the outbreak of the Civil War must suffice here. Writing of the establishment of the system many years after his incumbency as the first State superintendent of education, Gen. William F. Perry, said: "Alabama was the first of the cotton States, and one of the first of the slave-holding States to enter upon such an undertaking."[1] But some allowance should probably be made for Gen. Perry's father-like enthusiasm over the school system the beginnings of which had taken form under his care. What is probably nearer a correct statement is that between 1856 and the outbreak of the war Alabama had one of the most effective school systems in the whole South and apparently the most effective in the lower South. In his last published report,[2] before the schools of the State entered the twilight of the Civil War period, State Supt. G. B. Duval reported 180,160 children in the State between 6 and 21 years of age, and 98,274, or 54.5 per cent, enrolled in school. The total expenditure given for that year was $564,210.46. In that period the State school funds were apportioned on the basis of the school census, but the State superintendent was instructed to eliminate, as far as possible, the inequalities due to the fact that some townships possessed large endowments while others had little or none.

The instruction of slaves.—Historical writers have given little or no concern to negro education in slave times. Presumably this want of concern has been due to the assumption that there was no such thing as the instruction of slaves, but as a matter of fact there was.[3] No inconsiderable number of negroes in Alabama came out of slavery with the ability to read and write. At least three causes operated to give to a small proportion of the slave population a modicum of textbook instruction. These were (1) the clandestine efforts of antislavery enthusiasts; (2) the profits accruing to some masters by reason of the ability of their slaves to read, write, and otherwise transact business; and (3) the kindness of young masters and mistresses in instructing their servants. There was, moreover, a more or less general feeling that negroes might be permitted to learn to read their Bibles, and what is known as "vocational training" was widespread. But the fear of insurrectionary influence and the spread of abolitionist propaganda led to the legal regulation of slave assemblies and to the creation of the patrol system;[1] and, as the abolitionists became more insistent, the education of slaves, in the case of individuals as well as in assemblies, was prohibited by law. In making this prohibition, Alabama was neither first nor last among the slave States but occupied a middle ground; its law was enacted in 1832.[2] These laws generally had the effect of preventing organized effort to instruct the slaves, so that such literacy as negroes possessed when emancipated was of the sort that young masters and mistresses had chosen to give, in disregard of the law, to their favorite servants.

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[1] W. F. Perry, The Genesis of Public Education in Alabama, *In* Transactions of Alabama Hist. Soc., vol. 1, 1897–98.

[2] For the year ending Nov. 30, 1858.

[3] See C. G. Woodson, The Education of the Negro Prior to 1861.

Private academies.—Before the ante bellum period of public education is passed, it is well to note briefly the private academy, which sprang up and flourished in that period. From the admission of the State to the enactment of the public-school law of 1854, one of the principal forms which educational measures in the legislature took was the incorporation of academies, numerous such measures being considered by each legislature. In 1850 there were in Alabama 166 such institutions with 380 teachers, 8,290 pupils, and an estimated income of $224,279.[3] Academies throughout the country were in general of two classes: (1) Those whose function was to meet the local school needs, elementary as well as secondary; and (2) those designed to serve a wider clientele and organized with grammar and secondary grades with a view to drawing boarding pupils. The academies of Alabama were largely of the former type. State Superintendent Duval, in his report of 1858, noted the beginning of the decline of the academy in that State.

Higher education.—Alabama has no great number of institutions of higher learning, but in the opinion of many it has enough, if those that have been established were only more generously supported and their usefulness consequently more widely extended. The State University was the first of these institutions to be founded. It was provided for by legislative act of December 13, 1821, but not until April 17, 1831, was it formally opened. Its chief source of support has been throughout its history the grants of lands made by Congress. The proceeds of the first of these grants, on the failure of the State bank, ceased to have actual existence and have since constituted only a paper fund, or an indebtedness of the State to the university. The present constitution guarantees to the university $36,000 annually as interest on its funds. In 1865 a body of Federal cavalry destroyed nearly all of the university buildings, but in 1884 Congress made somewhat tardy but generous restitution in the form of an additional land grant of two townships, or 46,080 acres. Much of this has proved to be mineral land.

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[1] The occasion of the negro's fear of the "patteroller."

[2] Clay, Digest of the Laws of Alabama, p. 543.

[3] American Journal of Education, vol. 1, p. 368.

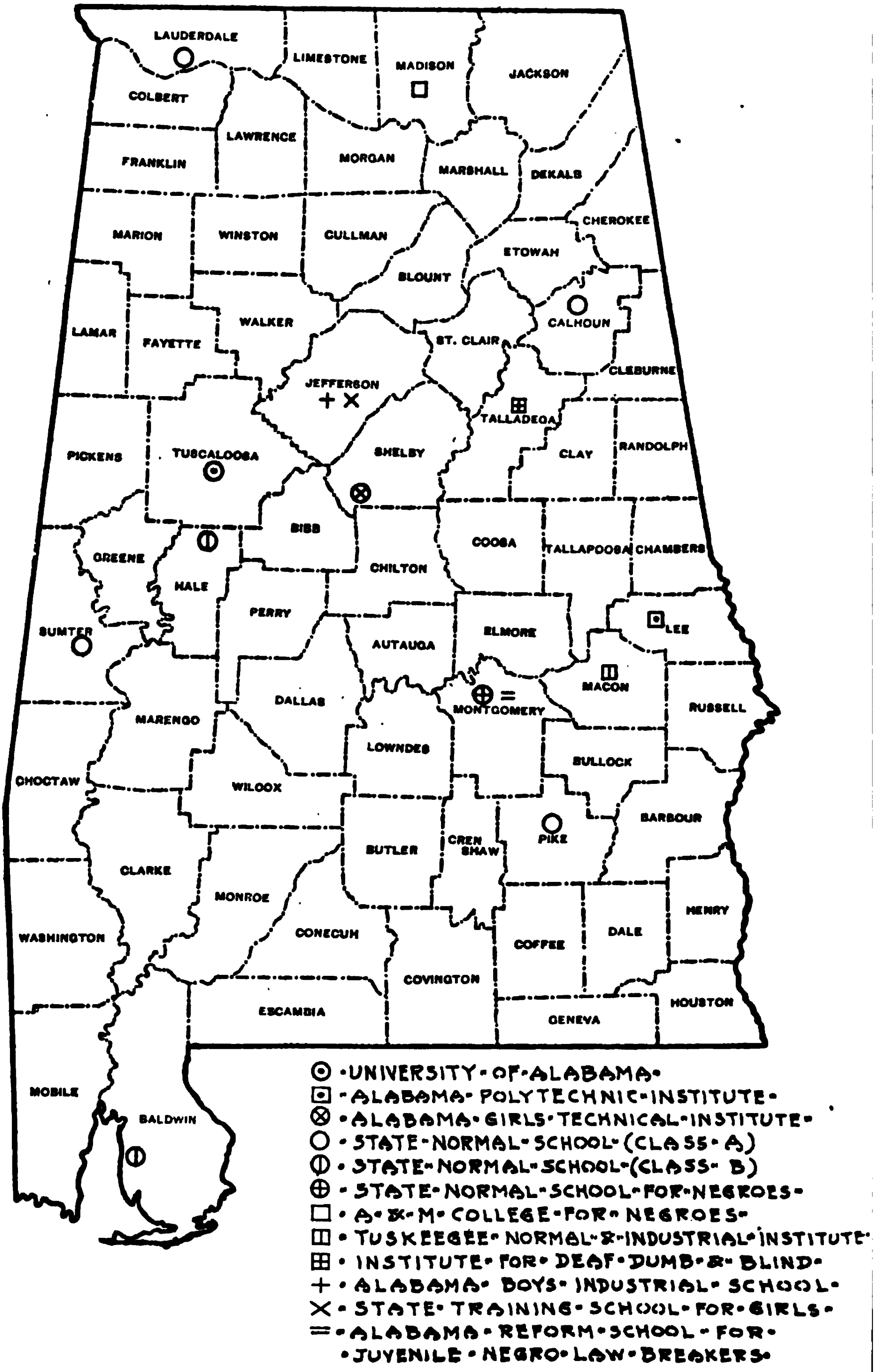
The Alabama Polytechnic Institute, formerly called the Agricultural and Mechanical College, was established at Auburn in 1872 when the State legislature assented to the provisions of the first Morrill Act of Congress, enacted in 1862. It is the State land-grant college for white persons. The corresponding institution for the colored race is the Agricultural and Mechanical College for Negroes, which was organized as a State institution at Normal, near Huntsville, in 1875.

A State institution of junior-college grade is the Alabama Girls' Technical Institute, known prior to 1911 as the Alabama Girls' Industrial School. It was established by legislative enactment in 1893 and was opened at Montevallo in 1896.

Public normal-school education was permanently inaugurated in the State in 1873, when the Florence Wesleyan University was given to the State by the Methodist Church on condition that it be used for training teachers and was thus made the State Normal School at Florence. Schools of like grade and character were established at Jacksonville and Livingston in 1883, and the Troy Normal School followed in 1887. Two other schools for white persons, now known as "Class B Normal Schools," were later established at Daphne and Moundville. The training of negro teachers was established on a permanent basis with the opening of the Agricultural and Mechanical College for Negroes and has since been extended to the normal school at Montgomery and to Tuskegee Institute.

Outline history of private and denominational institutions.—Spring Hill College, a Catholic institution founded by the Jesuits near Mobile in 1830 and chartered in 1836; Judson College, a Baptist school for girls founded at Marion in 1838 and opened January 7, 1839; Howard College, Baptist, an institution opened as a college for men at Marion in 1841, but projected several years earlier as a manual labor school, removed to Birmingham in 1887; Athens College for Women, Methodist, chartered in 1843 and located at Athens; Southern University, Methodist, incorporated in 1856 and opened in 1859 at Greensboro, united with Birmingham College in 1918; St. Bernard College, Catholic, founded by the Benedictine Order at St.

MAP SHOWING LOCATION OF STATE INSTITUTIONS OF HIGHER LEARNING & SCHOOLS FOR DELINQUENTS AND DEFECTIVES



MAP 2.

Bernard in 1892 and chartered in 1893; Birmingham College, Methodist, opened at Birmingham in 1898, united with Southern University as indicated above; Woman's College of Alabama, Methodist, founded at Montgomery in 1906. Two notable institutions for the colored race are Talladega College, opened in 1867 under the auspices of the American Missionary Association, and Tuskegee Institute, nonsectarian, established by act of the legislature of 1881.

The Civil War and Reconstruction.—Reverting now to the public school, we come to a period of Alabama history which all but saw the destruction of the great work of Meek, Curry, Patton, and Perry, and which in effect, directly and indirectly, retarded educational progress for more than a quarter of a century after its ghastly specter finally withdrew. Though reduced in number, deprived of a large measure of their support, and showing an attenuated enrollment, the schools of the State managed to struggle along through the war period and to maintain their general organization. The system, however, seemed to come to worse straits in the years immediately following. In the administration of Gov. Robert M. Patton, which extended from December 30, 1865, to July 13, 1868, when the Reconstruction government was inaugurated, some of the school funds seem to have been used "to meet other pressing debts of the State," there being some counties to which no funds at all were paid, or, at least, which did not draw their share. Of public school moneys at this time Dr. Weeks says:[1] "The total apportionment for 1866 was $413,389.07, of which $362,223.60 was drawn and $51,625.09 undrawn. In 1867 the figures were $290,250.12 apportioned, $133,195.83 drawn, and $157,054.29 undrawn. The sum apportioned for schools December 1, 1867, to July 1, 1868, was $45,411.46." But no wrongdoing is imputed to Gov. Patton's administration; those were trying times.

The Reconstructionists who came into full power with the adoption of the constitution of 1868 set up a school system of a new sort in Alabama. The constitution provided for a State board of education with legislative powers in respect to the schools and with administrative control over the whole system, from the university downward. The old educational fund was declared a "perpetual fund," and the State was obligated to pay interest on it; "one-fifth of the aggregate annual revenue of the State" was to be set aside for schools, and local and poll taxes were authorized.

Three outstanding facts in connection with the schools of the Reconstruction period were a strong centralized State control, an apparent effort to provide more public funds, and a provision in the constitution that the schools should be entirely free. Some of the results obtained were a top-heavy, inefficient, and otherwise questionable administration; an appreciably good system on paper, but in actual practice a system without sufficient funds to provide absolutely free schools, as they purported to be, for reasonably long terms and with the right kind of teachers; and a feeling of hostility on the part of most of the white people to anything that had its origin with what they chose to call the "carpetbagger" and the "scalawag."

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[1] Weeks, History of Public Education in Alabama, p. 85.

On the displacement of the constitution of 1868 by that of 1875 and under the new constitution the enactment of the laws of 1877 and 1879, the Reconstruction school system, except for a vestige here and there, passed into desuetude, and a new system, founded for the most part on the laws of 1854 and 1856, arose instead. When the "men of the old school" regained control of their State they simply returned to the point whence they had left off at the outbreak of the war. Of the effects of Reconstruction Dr. Weeks says: "The constitution of 1868 and the Reconstructionists did little for education in Alabama. There is no ground for the claim that Reconstruction and the Freedmen's Bureau founded (or even substantially advanced) the cause of public education in that State."[1]

A quarter century of recoupment and resumption of progress.—To sum up from the beginning of the Civil War, it may be said that the strife, turbulence, financial strain, and final despair of the war period and years immediately following told heavily on the schools; that the Reconstruction system, exotic, unwelcome, and mismanaged, was a misfit; and that a new order must arise from the ruins of the old.

The constitution of 1875 omitted the provision for a State board of education. As a result of this omission the State educational institutions each passed to the control of a board of trustees, and the general supervision of the common schools was vested in the State superintendent of education. The constitution no longer applied one-fifth of the income of the State to schools, but provided a State appropriation of $100,000 and directed that more should be appropriated when the finances of the State should warrant. The interest on the school fund was pledged, and a poll tax for the benefit of the schools of the several counties where collected was authorized. Local property taxes, which had never obtained considerable hold in the State, were not provided for, except in Mobile County, which still retained its separate system, but local revenues for general purposes might, so long as the constitutional limitation was not exceeded, be appropriated in part to schools. This practice became widespread in incorporated municipalities, but attained little vogue in the case of counties. In the later years of the period here considered, a few counties availed themselves of the privilege.

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[1] Weeks, History of Education in Alabama, p. 114.

Under the new order county superintendents were appointed by the State superintendent and continued to be so appointed until 1889, when they became elective. The unit of local school administration was the township, except in the case of incorporated municipalities and of districts created by special acts of the legislature, of which there came to be many. Territory not organized as municipal or special school districts remained under township organization until 1903. One township trustee was at first the local administrative officer, but the number was later increased to three. Teachers were certificated by county superintendents. The practice of supplementing public funds with subscriptions and tuition fees continued. The basis of apportionment of State funds was the school census, as it had been under the laws of 1854 and 1856. Negro education, which had begun in Gov. Patton's administration and had been extended by the reconstructionists, was continued in this period. The constitution of 1868 was silent on the matter of separate schols for negroes, but in that of 1875 we find that "separate schools shall be provided for the children of citizens of African descent."

Such, in brief outline, was the school system provided by the constitution of 1875 and supplementary acts of the legislature passed in 1877 and 1879. Little radical change was made in the school law between 1879 and 1898, but some noteworthy new provisions were added. Facilities for training teachers were extended; more liberal provisions were made for the development of city school systems; and by 1895 a chain of congressional district agricultural schools, one in each such district, had been developed from a beginning with a single branch experiment station in 1885.

For the school year 1898–99 there were reported 634,061 children of school age (7–12). Of this number, 433,733 were enrolled in school, and an average of 341,138 were in daily attendance. The total receipts for school purposes amounted to $916,450, and an average term of 100 days was maintained.[1]

During the last quarter of the nineteenth century, it may be said that the Alabama schools showed progress, but a progress scarcely commensurate with the material growth of the State and therefore inadequate to the need. For, when the people started their school system anew, after the passing of the Civil War and Reconstruction period, they had fallen behind educationally, and there was need of overtaking the States that had gone ahead. That this need was not fully recognized and met is the leading count in the indictment against the Alabama people with reference to their school system between 1875 and 1898. The State was progressing educationally, and commendably so, but its progress was made relatively to its own past and not to the great advancement in other States. It was the custom of some orators to point with pride to Alabama's educational achievements, but these orators usually confined their comparisons within the State.

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[1] Report of U. S. Commissioner of Education, 1898–99, vol. 1, pp. lxviii, et seq.

The dawn of better things.—By the year 1898 it was clear that a new day was at the dawning. From the time of its adoption, the educational article of the constitution of 1875 had been unsatisfactory to many of the friends of education. The want of authority to provide local public funds was the chief point of attack, and a number of cities and towns even went to the extremity of seeking to stretch the constitutional limitation and make a local school levy. But the supreme court of the State, true to the high standard which it has long maintained, refused to read into the constitution what had not been put there by the framers, and local taxation specifically for school purposes was declared unconstitutional. The "Hundley amendment," a proposal to provide for a district tax of 2½ mills on the dollar, was submitted to the voters in 1894, but the State was at that time stirred to its depths by a bitter political contest between the Democratic and Populist Parties, and the period of financial depression was then at its worst; so the amendment was lost. But the outlook was widening, and the time was at hand for a forward movement. Many of the northern counties, and some of those in the south, were undergoing great industrial development; cities and towns either took new life or sprang up from the beginning to be considerable centers of population; and the people were more and more recognizing the need of increased intelligence.

In 1898 John W. Abercrombie, a man who knew to its remotest limits the educational system of the State, came to the superintendency of education. The times were changing, and with them the quality of the State superintendency. Mr. Abercrombie saw, as few if any of his predecessors had seen, the fundamental needs of the schools and dared to tell the whole truth with regard to them. With the question as to how much the new superintendent contributed to the changed viewpoint of the people, we shall not concern ourselves; questions of the influence of personality have always perplexed the historian. But the fact is of great concern that in the last years of the century the people began fast to become forward looking and showed a growing desire to know precisely what their educational status was. "With the administration of Mr. Abercrombie begins the modern era of public education in Alabama," says Dr. Weeks.

Mr. Abercrombie was superintendent from October, 1898, to July 1, 1902, when he resigned to accept the presidency of the State university. His recommendations to the legislature were in accord with the best educational practice of the time, and some of them were embodied in law before he left the superintendency. They comprehended local taxation, adjustment of the poll-tax law, apportionment of funds within the counties on the basis of average attendance, qualified county superintendents to devote all their time to school work, State certification of teachers, improved school buildings, employment and payment of teachers according to grade of certificate held, absolutely free schools for five months each year, compulsory school attendance, a single board of control for the congressional district agricultural schools, regulation of degree-conferring institutions, and appropriations for summer normal schools. In the incumbency of Mr. Abercrombie the legislature provided for a system of State certification of teachers, State uniformity of textbooks, a five-months term of free school, and for a convention to frame and submit to the people a new State constitution.

Education and the new constitution.—The constitution proposed by the convention organized to frame it was ratified by vote of the people and went into effect in November, 1901. Under its provisions, the superintendent of education remained the chief administrative and supervisory officer of the schools, but, with other State officers, was made ineligible as his own successor. The administration of the common schools and of the higher institutions remained, in fact, substantially as before. It was in the matter of school support that the most noteworthy changes were made, but even here there was no radical change in policy. The State remained the chief source of support, and the local district was still denied the right to tax itself. A substantial increase in the aggregate school funds, however, was provided. An obligatory State school tax of 30 cents on the hundred dollars was provided for, and a 10-cent county tax was authorized. Only in the case of a few specified cities was a district tax permissible, but the older practice of levying a local tax for general municipal purposes and appropriating to the schools from the fund thus provided was still valid. Again Mobile County was permitted to retain its separate system.

From these constitutional provisions the schools received decided impetus, but those who had hoped for much from the convention must have felt keen disappointment. True, the State as such was now contributing generously to the support of public education, but the much-needed local self-help, far from being encouraged, was positively denied.

Under the new constitution two adverse conditions continued as they obtained prior to its adoption. First, the schools in rural communities suffered more than those of the cities for want of funds, for the cities had recourse to appropriations from their general municipal revenues and were able by this means to maintain reasonably good schools, while the rural community had to rely on the State and county taxes alone; and these were insufficient in the greater part of the State. The second adverse condition was the provision from State funds for the schools for whites of the Black Belt to the detriment of the schools for the Negroes of that part of the State. State funds are apportioned under the constitution to counties on the basis of the number of persons between 7 and 21 years of age, and these funds are distributed within the counties in the discretion of the county school authorities. As a result, in the Black Belt section of the State, the white schools are provided for from State funds alone and without the provision of local taxation, and the Negro schools receive less than their proper share. Thus the people of the Black Belt, feeling no need of local school funds and being therefore indifferent, if not positively opposed to local taxation, have continued one of the retarding elements in the educational development of the State.

Some of the laws enacted in years immediately following the adoption of the new constitution have already been mentioned. Further legislation enacted in succeeding years included the revision of the certification and textbook laws, the substitution of the county school district for the older township organization and community district except in the case of incorporated municipalities of 2,000 population or more, the establishment of county high schools, the provision for schools for dependent and delinquent children, the placement of the normal schools for whites under a central State board, the reorganization of the district agricultural schools, the appropriation of money for rural schoolhouses and for the development of rural-school libraries, and in 1915 a compulsory-attendance law.

The progressive school legislation of 1915.—The most important recent change in the State's school law was embodied in the constitutional amendment submitted by the legislature of 1915 and ratified by the people in November, 1916. This added to the taxes already authorized a 3-mill county school tax when voted by a majority of the electors and a 3-mill district tax when likewise voted after the county's decision to levy a county tax of 3 mills. The machinery was now provided for supporting a system of free public schools in fact, machinery which, from the birth of the State, the framers of constitutional provisions had seemed loath to see pass to the hands of the people. Two things of prime importance remained to be done. First, the permissible taxes remained to be voted in the several counties and districts, and secondly, the property valuation of the State needed to be raised to a point where it would produce adequate revenue for the support of the schools and other public enterprises. The first of these has already been in large measure accomplished.

As the educational leaders become more aggressive and forward-looking in the closing years of the past century, so they have continued in more recent years. The recommendations and efforts of all recent State superintendents have generally been in accord with the best educational thought of the country, and whatever shortcomings may be charged to their administrations have probably been due more to the circumstances than to the personal element.

The principal fault of the Alabama educational system has been the century-old disposition of the people, particularly the molders of policies, to look too much upon education as something to be bought in the market by the well-to-do or to be provided by the State at an irksome personal sacrifice on the part of the individual taxpayer. If now the people will clearly see a public responsibility in the provision of schools and will wisely put ample public money in them as an investment paying large dividends, the State may soon take educational rank suited to its great material advantages.

Chapter IV.

ORGANIZATION OF THE STATE SYSTEM OF EDUCATION.

GENERAL STATE ADMINISTRATION OF EDUCATION.

The superintendent of education the most important State administrative official in Alabama.—Education is the most important business of the State. It will become even more important in the years to come as the enlarging conception of the Nation's educational needs become more firmly fixed in the lives of the people. In Alabama the superintendent of education administers more than one-half the funds raised by State taxation. This amounts to several million dollars a year. He is charged with "general supervision over all the educational interests of the State" and partly with the "care and improvement of the common schools and the promotion of public education."[1] In a sentence he is, under the State constitution, the administrative and supervisory head of the whole State system of public education, and his authority extends de facto to the State's higher educational institutions also. The State superintendency in Alabama is, therefore, a big man's task—none in the State is more important or more difficult, if one takes into consideration the constitutional and financial limitations of the office.

Legal limitations of the superintendency.—By constitutional prescription the "powers, duties, and compensation" of the State superintendent "shall be fixed by law."[2] This has given the legislature broad discretionary powers, which have been used here as in many other States unintentionally to limit the administrative and supervisory efficiency of the office. The State superintendency is more important than the presidency of either the university or the Polytechnic Institute, but popularly the office is not so classed or ranked. It is a political office; the tenure is limited by law to one term of four years, and the salary—fixed by law at $3,000 per annum—is so low that the exceptionally capable men who have of late years held it have done so at a real financial sacrifice.

Education should be wholly removed from party politics. This needs no argument. Alabama has for many years chosen its city superintendents from the ablest available candidates, regardless of political affiliation or residence. Since 1915 Alabama county superintendents have likewise been appointed regardless of politics, with most satisfactory results.

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[1] General Public School Laws of Alabama, 1915, par. 1685.

[2] Constitution of Alabama, Art. XIV, sec. 262.

The greatest objections to electing the State superintendent of education by the general electorate are the following:

1. This method of selection limits the field from which to choose, as the superintendent must be a citizen of the State. In States where the superintendent is appointed by the State board of education or by the governor he may be selected from the country at large. Such freedom of selection is clearly in the interest of better service.

2. Where the State superintendent is selected by popular vote the salary is fixed by law. The salary can not be adjusted to fit the person desired, but a person must be found to fit the salary.

3. Where the State superintendent is elected by popular vote the term of office is short—two to four years—and reelection is uncertain. This lack of continuity in the service is a serious handicap to the superintendent and the service, however capable the superintendent may be.

4. This method of selection makes the office political, and subjects it to all the fluctuations of party and factional politics.[1]

Permanent professional superintendents in other States.—The trend of the times is to make the State superintendent an appointive official. This is now so in 17 leading States. In most of these States there are no limitations in regard to previous residence. The superintendents are, as a matter of fact, appointed from the country at large, chiefly for their professional ability and success. As recent illustrations of this modern way of choosing superintendents may be mentioned New Jersey selecting a commissioner of education from Indiana, Pennsylvania selecting its superintendent of public instruction from New York, Massachusetts obtaining its commissioner of education from Maine, and Maine in turn recruiting its State superintendent of education from Nebraska. But it would probably not be necessary to go far afield for this official; the important thing is to make the office appointive.

One or another of two different systems is commonly followed in choosing a professional State superintendent. The governor may appoint him or he may be elected by a State board of education. The latter method is considered the more satisfactory. Where the choice is left to the governor there is at least the old danger of continuing the office in politics. If chosen by a nonpolitical State board of education this danger is minimized. The first appointment might be probationary for a term sufficiently long to demonstrate the appointee's fitness for the office. Reappointment should be made for an indefinite term of years, the State board retaining the right to remove the incumbent from office for misfeasance or malfeasance. With the administrative freedom possible under such a permanent organization as this, the State superintendent would be able to raise the office to the importance given it in the constitution, and which it must reach if the best interests of school education are to be conserved in the State.

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[1] See Manual of Educational Legislation, Bu. of Educ., Bul., 1919, No. 4, p. 12.

It may also be observed that the States which have permanent professional superintendents likewise pay better salaries than the other States do. The following are some of the States which place a premium on scholarship, experience, and general fitness, by appointing their superintendents, and the salaries paid them: Pennsylvania, $12,000; New York, $10,000; New Jersey, $10,000; Massachusetts, $6,500; Rhode Island, $5,000; Minnesota, $5,000, and Ohio, $4,000.

Present organization of the State department of education.—The State superintendent is charged, under law, with many important administrative, inspectional, and supervisory duties. He administers the State's general educational fund; he keeps account of the capital of the sixteenth section and other trust funds; he apportions the State's funds to the several county boards of education and examines the accounts of these boards. Aside from his duties as the State's financial administrator of education, he is charged with the direction and supervision of all the urban and rural schools, both elementary and secondary. He is expected to supervise all these schools, to help and direct county and city superintendents of schools, and the teachers working under their direction. He is likewise president or member of many boards, including the State board of examiners, the State library commission, the State illiteracy commission, the State high-school commission, and the State vocational board, all of which call for expenditure of much time and energy. He must also prepare and present an annual report to the governor and prepare occasional reports on other educational subjects; all this he does in addition to his voluminous correspondence which covers all phases of school administration and supervision in the State.

To carry out these manifold duties and responsibilities to the letter would require a much greater staff of assistants than the law allows. It is important that the legislature realize that it avails little to charge a State superintendent with many administrative, supervisory, inspectional, judicial, and other duties unless it gives him a sufficient "inside" and "outside" staff of assistants to help carry out his educational plans.

Now, what provision has the State made to supply the office of State superintendent with an effective staff of assistants? The statutes limit him to one chief clerk, two bookkeepers, and one stenographer.

This staff may have been sufficient when the office was organized, but it is wholly inadequate now. It is true that the genius for organization on the part of the present superintendent and his immediate predecessor has drawn together at the State department's offices an exceptionally efficient staff of workers, some of whose salaries are provided by special legislative appropriation, and some by private foundations or by public subscription. The General Education Board pays the salaries of two rural-school agents, one for white and one for colored schools. The staff of the Alabama illiteracy commission is maintained by private subscription, and the State board of examiners and the State institute and teacher-training staff, which are also considered as part of the department of education, are paid by direct State appropriation.

As was mentioned above, the office is well organized and performs a great service to the State; but it is highly important that the legislature come to the superintendent's assistance at this time and furnish the enlarged clerical force requested by the State superintendent in his annual budget, which is referred to later in this chapter. Not alone are clerks and stenographers needed; the 175 odd secondary schools should be inspected and classified by a State high-school inspector working out from the State department; a technically trained examiner of accounts is needed to check up the books of the county boards of education and other boards that receive State educational funds. This is quite apparent when one recalls that practically one-half of the State's entire revenue is expended in education. These and other assistants must be provided to make the department as efficient as the State superintendent would like to make it.

A larger conception of the importance of the office.—The public conception of the functions of the State superintendency has undergone marked changes in recent years. The thinking public are beginning to realize that there is no more important office in the gift of the State than this office which is charged with the education of the future citizens of the State. The State superintendent has, in most States, been a political functionary liable to all the fluctuations and changes in party politics. His usefulness has generally been limited because of poor financial support. The old superintendency is still limited to the mechanical routine of office administration in many States. This is highly unfortunate. In Alabama the State superintendent of education has always exerted considerable influence in shaping educational policies. The legislature should now make him the real head of the educational system of the State by removing the office from political influence, by dignifying it with a salary commensurate with its high importance, and in other ways increasing the direct power of the superintendent. In fact a complete reorganization of the office seems highly necessary in order to make the superthree of these boards were merged into one central State board of education in common with the other boards of trustees maintained for other schools. However, because of certain rather fundamental differences in policy and management, endowments, etc., of the several schools, the committee believes that these three boards may as well continue as now constituted. (See Chapter XIX.)

Establishment of the State board of education.—The survey committee believes that the desired reorganization can best be brought about by establishing a State board of education and giving it full control over the elementary and secondary schools of the State, over the normal schools for white teachers, the Agricultural and Mechanical College for Negroes, the Montgomery Normal School for Negroes, schools for the deaf and blind, the Alabama Industrial School for Boys, the Industrial School for Girls, the Alabama Reform School for Juvenile Negro Law-breakers, and the State School for Feeble-minded Children (if established), and to absorb the functions of the interim State board for vocational education created by the present legislature to meet the temporary requirements of the Smith-Hughes Act, and all other boards which are now headed up in the State department of education.

This State board should primarily be a lay board representing the larger educational policies of the public, delegating the professional side of education and the administration of their general policies to the new appointive executive official, the State superintendent of schools. The board should be composed of nine members, to be appointed by the governor, by and with the advice and consent of the senate; the term of office to be 12 years; not more than three members to retire each quadrennium, thus perpetuating the board and making it permanent. Vacancies should be filled by the governor. The appointment should be for absolute worth and regardless of residence, occupation, party affiliation, religion, or sex, provided that no member be chosen from the county in which a higher institution of learning is situated. The members should serve without remuneration, except a reasonable per diem and actual traveling and other necessary expenses.

The general powers and duties of the State board of education should be:

1. To have general oversight and control of the elementary and secondary schools of the State and all other educational institutions, except the university, the Polytechnic Institute, and the Technical Institute.

2. To elect a State superintendent of schools to be the executive official of the board.

3. To act as a State vocational board to administer the Smith-Hughes Act as it applies to this State.

4. To supplant and perform all the powers and duties of the present State Normal School board, the State high-school commission, the State illiteracy commission, the State textbook commission, and all other boards and commissions now administering schools and other educational institutions in this State other than the aforesaid boards of the three higher educational institutions.

5. To require uniform records and reports, in form to be to prescribed by the State superintendent of education, from all educational institutions supported by the State, and from all other organizations doing educational work and receiving State accreditment and recognition.

6. To classify and standardize, under the direction of the State superintendent, the public schools of the State.

7. To prescribe the standards and courses of study for the State normal schools, the educational departments of the denominational schools accredited under State law, and such other teacher-training institutions as may be established by law.

8. To adopt rules and regulations for the sanitary inspection of schools, and for the physical examination of school children; and in conjunction with other State authorities to see that the rules relating to school health, compulsory education, and child conservation are enforced.

9. To have general control of the schools for the deaf and the blind, the industrial schools for boys and girls, both white and colored, and the school for feeble-minded children when established.

10. To transmit to the governor an annual report, covering all the activities of the three higher State institutions of learning, and of the State department of education in its relation to all public elementary and secondary schools, and all other educational institutions under its jurisdiction.

11. To perform such other duties and functions as may be prescribed by law.

The State superintendent of education.—Under this proposed reorganization the superintendent of schools would become the executive official of the State board of education to carry out in detail the educational policies of this board. He should be appointed by the State board for professional ability and successful educational experience, regardless of residence or party affiliation. After a probational service to prove his ability, he should be reappointed for an indefinite term of years or at least for a period not less than five years. His salary should be commensurate with the importance of the office, and in keeping with what is being paid for this service in the most progressive States in which the office is appointive.

1. The State superintendent of education should be the executive official of the State board of education and executive head of the

State department of education, and should enforce all the rules and regulations made in conformity to the law by the State board for the public elementary and secondary schools and all other schools under its jurisdiction.

2. He should have supervision of all the different divisions of the State department of education and should be held responsible by the State board for the proper administration of the duties of each subdivision.

3. He should, in cooperation with the heads of the State's teacher-training institutions, and in conformity with law, prescribe courses of study for these training schools, adopt methods and standards for the certification of teachers, and for validation of teaching credentials from other States.

4. He should personally direct all other educational activities wherein the State department of education under law cooperates with the presidents and faculties of the higher institutions of the State through the State council of education.

5. He should have such other powers as under law belong to the office of superintendent of education.

The enlarged State department of education.—Figure 2 shows in a graphic manner how the enlarged State department of education should be organized. The governor represents the will of the people in appointing the State board of education. This board in turn does its work largely through its executive official, the State superintendent of education, who heads the 10 divisions of the State department of education.

The State department of education, it will be seen, is planned as 10 administrative divisions, all of which, in this State, should be organized immediately, if not already in operation. Other divisions may be added, or these reorganized from time to time as it may be deemed necessary.

(1) *The Executive Division* should have charge of the business management of the department and keep the books and records of the State board of education. The chief clerk of the department should head this division. He should also be secretary of the State board of education. The salary of the chief clerk is fixed by statute at $1,800. The salary of so important a position should not be less than $3,000. Because of the volume of work in this division due to the large State funds administered by the department, it needs two bookkeepers, one special examiner of accounts, and at least two stenographers, and one stenographer and file clerk—17 persons in all. The bookkeepers' salaries are also statutory, being fixed at $1,800 each. These salaries should be increased to at least $2,400 each. The examiner of accounts must be an expert and should supplant the present State examiners, who can not give the department of education the amount of time it requires because so many demands are

made upon them by other departments in the State government. The accountant is urgently needed to check up the State's accounts with the county boards of education and boards of other institutions

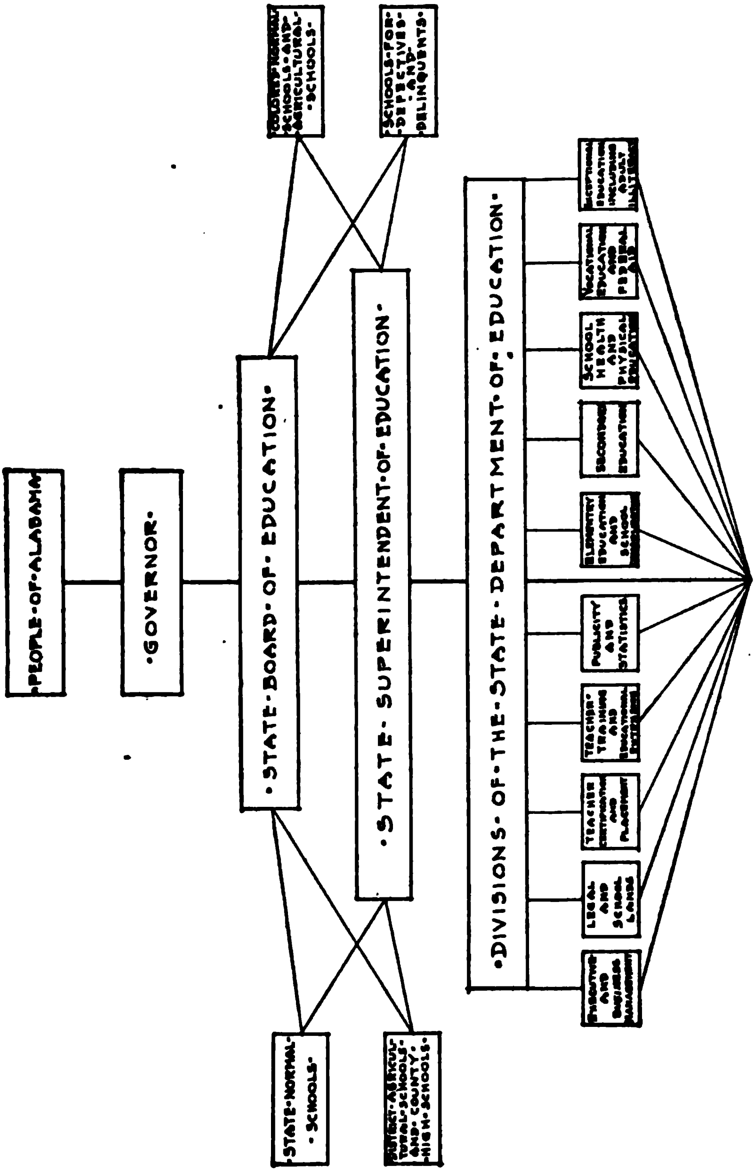
·PEOPLE·OF·ALABAMA·
·GOVERNOR·
·STATE·BOARD·OF·EDUCATION·
·STATE·SUPERINTENDENT·OF·EDUCATION·
·DIVISIONS·OF·THE·STATE·DEPARTMENT·OF·EDUCATION·
SCHOOLS·AND· AGRICULTURAL· ·SCHOOLS·
SCHOOLS·FOR· DEFECTIVES· ·AND· DELINQUENTS·
·STATE·NORMAL· ·SCHOOLS·
DISTRICT·AGRICULTURAL·SCHOOLS· AND·COUNTY· HIGH·SCHOOLS·
EXCEPTIONAL EDUCATION INCLUDING ADULT ILLITERACY
VOCATIONAL EDUCATION AND FEDERAL AID
SCHOOL HEALTH AND PHYSICAL EDUCATION
SECONDARY EDUCATION
ELEMENTARY EDUCATION AND SCHOOL
PUBLICITY AND STATISTICS
TEACHER TRAINING AND EDUCATIONAL EXTENSION
TEACHER CERTIFICATION AND PLACEMENT
LEGAL AND SCHOOL LANDS
EXECUTIVE AND BUSINESS MANAGEMENT

FIG. 2.—Proposed organization of the Alabama State Board of Education.

that are receiving State moneys for educational purposes. The budget of this division, including expense money for the accountant and increases for stenographers, would approximate $15,700 per annum.

(2) *Legal and School Land's Division.* This important division should remain under the immediate direction of the superintendent, who has power, under law, to interpret the school code and decide matters of controversy arising under it. If the legislature reestablishes a permanent State school fund by absorbing the present paper fund, this division will become exceptionally important. In any case the superintendent must administer all the remnants of the school lands. The department of education should have its own appraiser of land, the value of which is at the present time largely problematical. A special land agent should be attached to this division whose duty it would be to cooperate with the State auditor and the State department of justice in clearing up the State's titles to the remaining school lands. The total budget of the division would approximate $5,000 per annum.

(3) *Teachers' Certification and Placement Division.* The division should continue the work now in charge of the State board of examiners, and should be closely correlated in its activities with the division on Teacher-training and Educational Extension. Indeed, it would be quite feasible to place the head of the latter division in charge of the two. This division should maintain a placement bureau for teachers of this and other States desiring to find teaching positions. A small registration fee of, say, $1 might be charged, which would in a measure defray the expenses of maintaining the bureau. One clerk should be added for this purpose. The annual budget of the division is now $12,500. This division is self-supporting from the fees paid by teachers and requires no special appropriation from the treasury. The same would be true of the additional staff member to have charge of the placement bureau. The personnel of the division would number three board members, two permanent stenographers, and occasional clerical help for grading papers, etc.

(4) *The Division of Teacher-training and Educational Extension.* This division should direct all the teacher-training activities of the department, whether done under the head of State institute, State extension, or in cooperation with established teacher-training institutions. The State department under present arrangement directs State institutes annually in each of the 67 counties, for which four white and two colored institute instructors are required. The State department might well reorganize its county institute work and combine it with State Reading Circle work and reestablish it in cooperation with the normal schools for the purpose of aiding teachers in service to secure advanced standing in the teacher-training institutions in the State instead of, as now, for credit on certificates. This subject is discussed in another chapter (see p. —). The State makes an annual appropriation of $6,500 for institutes, which is from the annual State legislative appropriation of $350,000, to which is added examination fees paid by the teachers. The total

budget of the division for the present year was $15,500. The State should make a straight legislative appropriation of $15,000 a year for this division, which, in conjunction with the division on teacher's certification and placement, should be able to do an excellent piece of work in assisting to train, place, and certificate teachers.

(5) *The Division of Publicity and Statistics.* The State department would do the teachers of Alabama a great service if it were to publish a periodical dealing with educational progress in the State and Nation, and particularly keeping the teachers informed on all departmental policies, legislative rulings, etc. This division should have charge of such an organ of the department and also of the statistical and clerical work of the office. One person of good ability could do the work with odd-time assistance of other members of the department. All the State's department reports, records, blanks, courses of study, and manuals should be prepared through this division. The State superintendent's estimate for printing allowance for the ensuing year is $13,000. This is conservative. The total budget of the division would approximate $16,000.

(6) *The Division of Elementary Schools.* This division should have charge of elementary education in the open country districts and in the towns of less than 2,000 population. It should devise means to improve the schools and through field propaganda and expert advice to county superintendents and supervisors aid in improving school work throughout the State. School consolidation should also be centered in this division, as should all school building improvement under the special "rural school buildings' improvement law." Two rural school supervisors—one each for white and colored schools—are engaged in this work, but their salaries and expenses are paid by the General Education Board. The budget of this division would approximate $1,500 per annum for stenographic work.

(7) *The Division of Secondary Education.* The State department has no one to inspect and supervise the large number of secondary schools that receive State aid. This is unfortunate. The State has the right to require high standards of efficiency from these schools in return for the large amount annually spent on the district agricultural schools and the county high schools. All State aid to secondary schools should hereafter be contingent wholly on the excellence of work done and equipment provided by the county or community for this type of State-aided schools. (See Chapter IX.) Secondary school inspection would oblige the department to add to its staff a high-school supervisor. His salary ought not to be less than $2,700, as recommended in the State superintendent's budget, with $1,200 for expenses—a total of $3,900.

(8) *The Division of School Health and Physical Education.* Experience in other States has proved clearly that school health and

physical education should be left entirely in the hands of the public-school teachers, as school health and physical education are educational functions. This matter is explained fully in Chapter —. Such a division should be organized without delay to enforce all legislation in regard to school health and sanitation. It should direct health inspection of school children throughout the State and direct the county school health supervisors or school nurses in their local activities. The division should also prepare plans and specifications for public school buildings to be constructed in the State. This would require the full time of one health expert and at least part time of a capable architect. The budget would approximate $5,700 per annum.

(9) *The Division of Vocational Education.* The division should have actual charge of the work in vocational education intrusted by the State and Federal Governments to the State board of education.

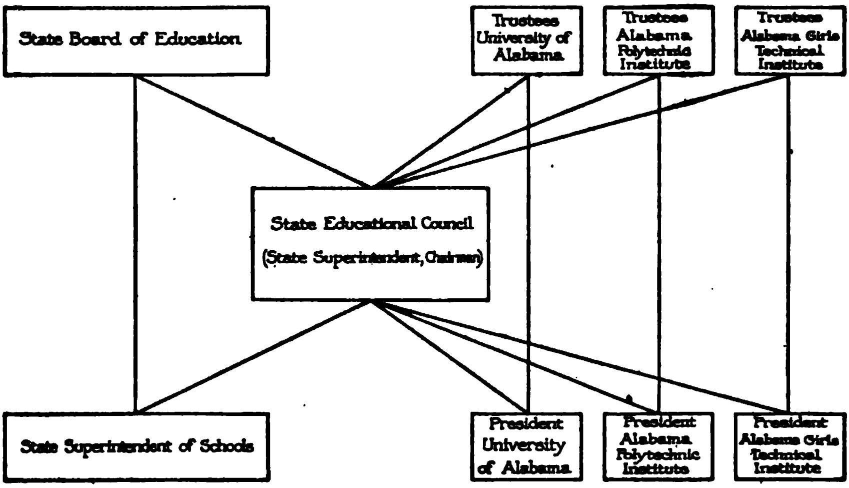
PROPOSED ORGANIZATION OF THE EDUCATIONAL COUNCIL
State Board of Education
Trustees University of Alabama
Trustees Alabama Polytechnic Institute
Trustees Alabama Girls Technical Institute
State Educational Council (State Superintendent, Chairman)
State Superintendent of Schools
President University of Alabama
President Alabama Polytechnic Institute
President Alabama Girls Technical Institute

FIG. 3.

One director of vocational education would at the present time be sufficient to cover the field well.

(10) *Division of Exceptional Education.* The schools for defectives, delinquents, and feeble-minded children should be under the immediate control of the State board of education, as the functions of these schools are primarily educational. The State superintendent should have direct charge of this division, although an educational expert of high rank would be in practical charge of the educational work in the schools. The full time of two persons would probably be needed to reorganize and maintain the work in exceptional education.

The Alabama illiteracy commission should also be added to this division, at least until such times as Federal aid may be granted to supplement State funds. The State needs two organizers, one for each race, and several part-time county workers for this pressing task. The budget for salaries and expenses would amount to $10,000 per annum. This work has heretofore been carried forward through private philanthropy, but must be taken over by the State, if illiteracy is to be blotted out.

The State Educational Council.—This, as suggested above, should be organized as a clearing-house board to have charge of and settle all educational matters of common interest to the schools directed by the State board of education, and to the schools under the three aforementioned boards of the higher educational institutions. The board might well be planned with a membership of nine persons—three representatives from the State board of education, one of whom must be the State superintendent, who shall be permanent chairman of the board; and two representatives from each of the three other boards and schools, one to be the president of each school, and the other a board member. The board would supplant the present ex officio relationships of the higher and other educational institutions of the State, and would provide them instead with a stronger board which would be able to coordinate the activities of all the schools on a more satisfactory plane than is now the case. Detailed discussion of the functions of this council appears in Chapter XX.

Recommendations for closer and more effective State administration of education.—A liberal forward-looking policy in administration of the State's school system is imperative if Alabama is to get the fullest returns for its State investment in public education. To this end the survey committee recommends:

(1) Organization of a State board of education to have full charge and control of all public elementary schools and such other schools as are included in the discussions in this chapter, except the University of Alabama, the Alabama Polytechnic Institute, and the Alabama Girls' Technical Institute.

(2) Appointment of the State superintendent of education by the new State board of education.

(3) Enlargement of the powers and duties of the State superintendent and State board of education in agreement with the details set forth above.

(4) Organization of a State council of education to consist of members from the State board of education and the State's higher institutions of learning, with powers and duties as prescribed above.

(5) Passage of such amendments to the constitution of Alabama as may be necessary to consummate the changes prescribed above.

Chapter V.

COUNTY SUPERVISION OF SCHOOLS.

The progressive county unit act of 1915.—Few States can boast of such a satisfactory school organization and administration law as can Alabama. The year 1915 will go down as a memorable one in the educational history of the State. Then was passed the constitutional amendment providing for county and local taxation; then was also enacted the new county organization act which has at least made it possible for Alabama to reorganize its country and village schools on a sound modern business basis. The law has not yet had time to demonstrate its full value, but it has already done much toward the educational rejuvenation of Alabama's rural districts, probably more than all the legislation of several decades past. It marks the beginning of a new era for rural and village school organization in better schoolhouses and school equipment and in a better spirit of school work. Most or all of the criticisms of this law seem to arise from those who have suffered some personal loss or inconvenience by it.

Before making a closer study of the law, it is well to emphasize the more urgent reasons why schools of this and other States should supply the best possible kind of supervision in rural districts. The teachers of rural Alabama are meagerly prepared for their work and are, generally speaking, inexperienced. If teachers ever needed expert supervision, these rural teachers do. Their problems are the most serious and difficult in the whole field of education; yet they have been obliged to shift for themselves, without the help of expert supervisors. Under the old law many rural schools were scarcely ever visited. One hold-over superintendent interviewed by the survey committee confessed that he was unable even to locate all his white schools, to say nothing of the colored. Such occasional visitation as the rural schools had under the old law is of little value, particularly if the superintendent has only a limited amount of professional ability and experience to draw upon when he does make the visit.

The new rural schools must be reorganized to meet the needs of scientific agriculture. This is bound to multiply the teachers' daily tasks. The superintendents under the old régime failed utterly in readjusting the course of study to answer the occupational needs of the people, and even the new superintendents will have their hands full and will succeed but indifferently unless they are given the assistance of able subject supervisors.

The old and new Alabama laws contrasted.—Alabama is one of 21 States having county or semicounty plans of school organization and administration. Prior to 1915 the State was classed as a semicounty unit State. Now it is recognized as a county unit State of purest type. The contrast of the old and the new laws is set forth so clearly and convincingly in a pamphlet recently published by the State department of education that it is reproduced here in parallel columns.[1]

OLD LAWS.	NEW LAWS.
PERSONNEL.	
Five members, four elected by the chairman of the district trustees, the county superintendent being the fifth man.	Five members elected from the county at large by the legal voters, both men and women being eligible.
QUALIFICATIONS.	
Qualified elector of the county.	Good moral character, at least a fair elementary education, good reputation for honesty, business ability, public spiritedness, and interest in the good of public education.
TERM OF OFFICE.	
Four years, the terms of all members being contemporaneous.	Six years, one or two members retiring at the end of each two-year period.
GENERAL DUTIES.	
To have entire control of the public schools within their respective counties, unless otherwise provided by law; to make rules and regulations for the government of the schools; to acquire, purchase, lease, receive, hold, and convey property for school purposes except where otherwise provided; to sue and contract.	To have entire control of the public schools within their respective counties, unless otherwise provided by law; to make rules and regulations for the government of the schools; to acquire, purchase, by the institution of condemnation proceedings if necessary, lease, receive, hold, and convey the title to real and personal property for school purposes except where otherwise provided by law; to sue and contract.
SPECIFIC DUTIES.	
(*a*) To place the county superintendent of education upon a salary basis, requiring him to give full time to the supervision of the schools.	(*a*) To elect a county superintendent of education, prescribe his duties and fix his salary.
(*b*) To elect a county treasurer of public school funds.	(*b*) To elect a county treasurer of public school funds.
(*c*) (No corresponding power.)	(*c*) To elect a successor of any member whose place becomes vacant by death, resignation, or otherwise, until the next regular election.

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[1] County organization and administration of schools in Alabama.

(*d*) To select teachers upon nomination by district trustees and to employ assistant superintendents and fix their salaries.	(*d*) To select upon nomination of the county superintendent of education, teachers, assistant superintendents, supervisors, and office assistants and fix their salaries.
(*e*) To erect, repair, and furnish schoolhouses, fix wages of employees and have control of the public school funds of the county except as otherwise provided by law.	(*e*) To erect, repair, and furnish schoolhouses, fix wages of employees, determine the incidental fees and have entire control of the public school funds of the county except as otherwise provided by law.
(*f*) Upon proper application, publication and notice, to rearrange the boundaries of any school district.	(*f*) To fix the boundaries of school districts and locate schools with reference to convenience, efficiency, and economy.
(*g*) (No authority to transport pupils at public expense.)	(*g*) To consolidate schools and provide for the transportation of pupils at public expense.
(*h*) ------------------------------	(*h*) To appoint from one to three trustees for each school.
(*i*) ------------------------------	(*i*) To enforce compulsory attendance as required by law.
(*j*) ------------------------------	(*j*) To dismiss the county superintendent or any other employee for cause or when in the opinion of the board the best interests of the schools require it.
(*k*) ------------------------------	(*k*) To provide for taking the school census.

REMUNERATION.

Two dollars a day for each day's work, for not more than ten days in any one year.	Actual traveling and hotel expenses incurred in attending meetings of the board for not more than 12 meetings in any one year.

SALARIES OF COUNTY SUPERINTENDENTS.

Four per centum of funds disbursed, not to exceed $1,800 from State funds per annum, or salary of not less than $1,000 a year.	Salary of not less than $1,000 a year.

The strong points in the law.—The new law contains many strong points which are readily apparent to unprejudiced people. The most important are these:

1. The new county boards are elected by the direct vote of the qualified voters of the county, and therefore represent the electors directly instead of, as formerly, the district trustees only.

2. The new county boards are permanent and their service is continuous. This was impossible under the old law because the terms of all the members expired at one and the same time.

3. The new boards are free from the domination of self-seeking county superintendents, who, as members of the old boards, had the power to assist in fixing their own salaries.

4. The new board is elected from over the county at large and not from commissioner districts. Under this method it is possible to make the selection from among the very ablest men of the entire county. It tends to eliminate selfish interests, which were liable to develop under the old plan in the more local commissioner districts.

5. The new board is free to equalize the educational advantages of all the county to the needs of all the people in the county. Thus local bickerings are disappearing.

6. The board now appoints the county superintendent regardless of residence, religious creed, political adherence, or sex. This is one of the strongest points in the law—the best fitted person gets the position.

7. The county board is now directly accountable to the people who elect them instead of to the local trustees as heretofore.

8. Under the new law the most important educational powers and duties are centered in the county board and its executive official, the county superintendent, because experience has demonstrated conclusively that the local boards of trustees are generally unfit, both by training and experience, to administer the important educational affairs of the schools.

9. The new organization is democratic—if democracy stands for the greatest degree of individual freedom compatible with the best interests of the majority of the people. It is just as democratic as the efficient policy pursued in Alabama cities in selecting city superintendents or in appointing county health officials or county surveyors or other similar specialists, of whose qualifications the general electorate is unable to judge.

Some reasons why the old law was superseded.—Alabama wisely abandoned the old system because it had failed to give its rural population the kind of public-school education that is demanded in every forward-looking agricultural State. Under the old system the two outstanding obstacles to good business management and educational efficiency were the political county superintendent and the large authority of the local board of trustees. A study of the latter has disclosed that:

1. *The local district boards of trustees were ineffective and impracticable.*—The State had approximately 6,000 such boards under the old law, each in charge of the three trustees. This made a small army of approximately 18,000 members in the State. An average county had about 260 trustees. Such an organization was inexcusable in any way one might consider it. It is unreasonable to expect that

in an ordinary county 260 men could be found suited by temperament and training to fill all these positions and willing to give this time to the duties of the office. Even if the men could have been found, there was neither business reason nor educational reason for bringing such a large force into the management of the schools.

2. *The board members often misdirected their efforts.*—Many board members gave their time freely to the schools and in some instances to good purposes, but generally their efforts were misdirected, because they lacked knowledge of educational needs.

3. *Selection of teachers.*—Teachers were chosen by the local boards, who did much as they pleased in these matters. Some counties which had superintendents of exceptional personality, it is true, allowed these educators a free hand in placing teachers; but this condition was, unfortunately, exceptional. The prevailing practice of selecting teachers by local boards has led to serious abuses which need not be mentioned here. Suffice it to reassert that the average school board in rural districts has been unable to choose teachers wisely. Small districts were unable to meet modern community needs. The small one-teacher district did not have within its boundaries what was necessary to make a modern community school. The small schools have been devoting their energies to the "tool subjects" almost exclusively. Few pupils completed the prescribed course of study. The schools were not organized to attract and hold the larger boys and girls, and most of the schools were unable to provide the social aspects required of modern education. The small, one-teacher district has unquestionably been responsible for the following fundamental weaknesses, from which all the schools in the State are suffering: Nonattendance of a large per cent of the school population, irregularity of attendance, and great wastage in attendance due to lack of interest in prescribed school work.

The county unit of organization in other States.—Twenty-one States are organized wholly or in part on the county-unit basis for school administration. Of these, Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, New Mexico, North Carolina, Tennessee, and Utah may be classed as of the pure county type; that is, in which practically the entire management of the schools rests with the county board of education. Arizona, California, Delaware, South Carolina, Texas, Virginia, and Washington belong to the mixed or semicounty type, in which the authority is divided between the county board and township or local district boards. Of the above States, Kentucky, Tennessee, Utah, and New Mexico have recently changed from the district unit of organization to the county unit, and Ohio and Texas from the district unit to the semicounty organization. The most recent State to reorganize on the new plan is New Mexico, whose

State superintendent reenforces the faith that Alabama leaders have in the system when he says:

> We now have the county board of education which has charge of all the schools in the county. This is a wise provision, as it centralizes the administration of the county schools. It has already stopped all financial leaks, and better qualified teachers are being employed. It is a great deal more economical than the old system, as all counties are required to work under the budget system.

It is generally conceded that satisfactory progress in school consolidation, in the establishment of rural high schools and the introduction of practical agriculture, home economics, and other industrial work of value is in many States chiefly due to the new businesslike county unit organization. Utah may be taken as an illustration. Since the State has been organized on the county unit system all the small schools, except 40, have been consolidated. This small group remaining is scattered over the edge of the desert. A well-planned system of county supervision by assistant superintendents and subject supervisors has supplanted the old inspectorial methods with close effective schoolroom supervision.

Who the county board members are.—A careful study of the personnel of the county boards of education has convinced the survey committee that in most of the counties of Alabama, strong, capable persons are now being chosen for the important task of reorganizing the schools. Exceptions to this rule are in counties where the people do not yet seem to appreciate their new prerogative and have permitted the elections to go by default to members of the old régime, who in turn have retained in office the former county superintendents regardless of their ability and qualifications.

The county boards usually comprise prominent farmers, bankers, lawyers, merchants, and other professional and business men who have the interests of the schools at heart and are willing to devote their time to the upbuilding of education in their own county. In Montgomery County, by way of illustration, the chairman of the board is a wholesale hardware merchant; the other members including a leading dry goods merchant, an abstractor and capitalist, and two prominent farmers. These five men and their executive official, the county superintendent, are in the midst of a school reorganization that bids fair to reconstruct the whole system of county schools in Montgomery County during the next six years. (See Chapter V.)

The qualifications for membership on county boards of education as fixed by law are none too high, but it would probably be unwise to make any changes in them at the present time. The county superintendents, in a questionnaire sent them by the survey committee, were asked "Are the present qualifications for membership on the county board of education satisfactory?" It is quite significant that 43 superintendents answered in the affirmative, 2 only in the negative, and 22 made no answer whatever. A large majority of superintendents seem to be satisfied with the qualifications of their administrative boards. It is interesting in this connection to know that when asked in regard to the requirements for their own qualifications only 19 county superintendents held these to be satisfactory, 47 believed they should be increased, and 1 failed to answer.

Who the Alabama county superintendents are.—The personnel of county superintendents compares favorably with that of other States. The superintendents are better paid than in many States and the tendency is to supply the much needed supervisory and clerical help. This could not have been said a few years ago. Forty-four new superintendents have come into office since the act of 1915 went into effect. A number of hold-over superintendents are likewise well qualified for the office they hold. Many of the superintendents were interviewed by the survey staff, five members of which spent much time in study of rural and village schools, accompanied by the county superintendents.

The following detailed tabulation was compiled from questionnaires answered by each of the county superintendents of the State:

TABLE 1.—*County superintendents, assistants, salaries, and preparation*—PART I.

Counties.	Length of service of present incumbent.	Number of assistants.		County budget.						Preparation and experience, in years.[1]						
										Academic.			Professional.		Experience.	
		Supervisors.	Clerks.	Salary of superintendent.	Salary of supervisors.	Salary of clerks.	Traveling expenses.	Miscellaneous.	Total.	Secondary school.	College or university.	Degrees.	Normal school.	Summer school, weeks.	Rural and village.	Town and city.
Autauga	1½	1	0	$1,000	$200			$500	$2,000	4			2	12	2	12
Baldwin	½	2	1	2,500	300	$600			3,600	4	3	A. B	0	12	3	8
Barbour	1		1	2,000		400		100	2,500	4	3	A. B	0		5	6
Bibb	½			1,200			$250	300	1,500	3	3		0	6	2	7
Blount	1½		1	2,100		150		100	2,200	2	2		0	6	3	1
Bullock	1½	2		2,150	500			750	2,900		6	A. B A. M	0			2
Butler	1½			2,000			450	150	2,600	1	4	A. B	1	24		11
Calhoun	18		1	2,400		1,000			3,400	7		A. B	5	6		24
Chambers	5½	1	1	1,800	500	300	400		3,250	2			2	12		9
Cherokee	1½		1	1,200		300			1,575	3					9	2
Chilton	6			1,500				175	1,675				2	6	8	
Choctaw	1			1,600				150	1,750	1			4	18	4	10
Clarke	2		1	1,500		450	300			1	4	A. B				10
Clay	6		1	1,500		300	100	200	2,000	1	2		3	20	2	10
Cleburne	6		1	1,000		240		500	1,500	1					14	14
Coffee	2	1		2,100	720		900	1,400	3,500				3	6	2	6
Colbert	½	2	1	3,000	800 300			1,400	4,400	3	2	B. A		6		13
Conecuh	2		1	1,500		480	300	400	2,400	2			4			11
Coosa	1½			1,500					1,500				3	[2]6	7	
Covington	2		1	1,800		150			1,950		4	A. B A. M	2½	12	7	6½
Crenshaw	6		1	1,800		200			2,000					6	17	
Cullman	1½	2	1	1,500	600				3,000	2				6	18	
Dale	6			1,600					1,680	2	2		3	12	7	12
Dallas	17	2		2,400	650 210			2,300	5,500		4	A. M				43
Dekalb	1½		1	1,200		600	400			3			2	6	6	5
Elmore	10			1,600					1,800				3		7	2
Escambia	2		1	2,250		900	21	813	3,663	4	3			18		7
Etowah	1½			2,100			400	100	2,600	3	4	B. S		12	3	8

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[1] No professional degrees reported.

[2] The superintendent in Coosa County had attended a school of education one year.

TABLE 1.—*County superintendents, assistants, salaries, and preparation*—PART I—Continued.

Counties.	Length of service of present incumbent.	Number of assistants.		County budget.						Preparation and experience, in years.[1]						
										Academic.			Professional.		Experience.	
		Supervisors.	Clerks.	Salary of superintendent.	Salary of supervisors.	Salary of clerks.	Traveling expenses.	Miscellaneous.	Total.	Secondary school.	College or university.	Degrees.	Normal school.	Summer school, weeks.	Rural and village.	Town and city.
Fayette	1			$1,500			$420	$300	$2,210	1	2		4	12	15	4
Franklin	1½			1,500					1,800	6			1		22	
Geneva	1½		1	1,500			500		2,600		3	A. B A. M		6	17	14
Greene	16	1		1,000	$300				1,300	6	2			2	20	
Hale	1½	1		2,000	330		400		2,050	3	5	A. B		24	2	4
Henry	1½			1,800					1,886	4	2			12	2	6
Houston	5			1,200			100	110	1,310	3					18	
Jackson	1½		1	1,500		$440	600		2,440	4			2	12	11	
Jefferson	2	15	4	5,000	22,260	4,040			37,050	2	4	A. M	0		10	8
Lamar	2		1	1,200		300	300		2,000	1			3	6	4	4
Lauderdale	5½		1	2,600		900	600		3,500	2			3		8	
Lawrence	1½	1		1,500	1,000				2,700	3			2½		4	13
Lee	1½	1	1	2,000	240	480			2,720	4				36	8	4
Limestone	6			1,800					1,800	2	3	B. S		3		26
Lowndes	1½		1	1,600		300			1,960	3						
Macon	6	2		2,000	700				3,500	2	2	B. S				8
Madison	13		1	4,000		1,100			5,400				3	4		18
Marengo	2			2,200					2,373		3	A. B A. M		15	1	10
Marion	1			1,500				45	1,545	3			2	36	14	
Marshall	1½			1,800				145	1,950	2			1	12	7	4
Mobile	18	5	2	[2]3,300	6,000	2,730			11,450	4	3	A. B A. M		12		10
Monroe	1½			2,400			600		3,000	4			4	48	10	11
Montgomery	1½	2	1	5,000	2,200	1,020			8,420	4	4	M. A M. D. C.			2	10
Morgan	7			1,600					1,600		4	M. A		6	16	
Perry	1½	1		2,000	00				2,100	4	5	B. A B. D			1	4
Pickens	13		1	2,000		(3)	400	280	3,150	1				8	5	1
Pike	6			2,400			600	150	3,150	4					2	

Randolph	15		1	1,800		800		600	3,200		3				20	
Russell	1½			2,100					2,250		4	Ph. B.			2	9
Shelby	5			1,800				50	1,850	3					25	
St. Clair	2		1	2,000		840	500	1,500	4,000	4	2	A. B		15	4	13
Sumter	26			1,800				75	1,875	4	3				19	20
Talladega	10		1	2,000		200		198	2,398		2				19	
Tallapoosa	1½	1		1,700	365				2,250	2	2	Bs. C.		4	3	10
Tuscaloosa	1		1	3,000		880	600		4,480	2	2			6	10	
Walker	1½	1	1	2,500	1,800	600	600	500	6,000	3			1	10	12	11
Washington	1½			1,500				200	1,700				2½	6	10	
Wilcox	1½			2,000			600			4	4	A. B			9	1
Winston	1½		1	1,500					2,000	3	1		1½	4		

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[1] No professional degrees reported.

[2] One assistant county superintendent at a salary of $2,100.

[3] $70 per month.

TABLE 1.—*County superintendents, assistants, salaries, and preparation*—PART II.

Counties.	Held office prior to 1915.		How has law of 1915 affected the schools?		Are present qualifications for membership on board of education satisfactory?		Are qualifications for county superintendent high enough?		If not, what should be required?	Is clerical and supervisory force adequate?		How many visits to each teacher annually?	Is salary sufficient for your needs?		If not, what should it be to make the office worth while?	What additional constructive work has superintendent accomplished?
	Yes.	No.	Favorably.	Unfavorably.	Yes.	No.	Yes.	No.		Yes.	No.		Yes.	No.		
Autauga		×	×		×			×			×	2		×	$800	Club work.
Baldwin		×	×			×		×	Normal school training.		×	2		×	500	Not much.
Barbour		×	×		×			×	5-years' experience		×	3		×	400	Community building.
Bibb		×	×			×		×	Normal school training.		×	1		×	800	Club work.
Blount		×	×		×		×				×	1		×	(1)	None.
Bullock		×	×		×			×	College graduation		×	2	×			Built one school, repaired, war work.
Butler		×	×		×		×				×	3		×	550	Suggestions in agriculture and manual training.
Calhoun	×		×		×			×	Normal course		×	1		×		Community gatherings.
Chambers	×		×			×		×	Normal and first grade.		×	2		×	700	Cooperation with farm demonstration agent.
Cherokee		×	×					×			×	1		×	300	
Chilton	×			×		×		×	Normal course		×	2		×	[2] 300	
Choctaw		×	×		×			×	Normal and experience.		×	1½		×	200	None.
Clarke		×	×			×		×	Experience		×	2		×	900	General work.
Clay	×		×		×		×		Special training		×	1½		×	300	None.
Cleburne	×		×			×		×			×	½		×	500	Do.
Coffee		×	×		×			×	First grade		×	2		×	900	War work.
Colbert		×	×			×		×	Special training		×	4		×	600	Community work.
Conecuh		×	×		×			×	Normal diploma		×	5		×	1,500	Supervision of building.
Coosa		×	×		×			×	Normal training		×	4		×	500	Club work.
Covington		×	×			×		×	Normal course		×	2		×	700	Very little.
Crenshaw	×		×			×		×								
Cullman		×	×		×		×			×		7	×			Consolidation and community work.
Dale	×		×			×		×	Normal course		×	3		×		Community activities.
Dallas	×		×		×		×				×	3	×			
DeKalb		×	×			×		×	First grade	×				×	600	Repair work, new buildings.
Elmore	×		×		×			×	do		×	3		×	900	
Escambia		×	×			×		×	Special training		×	3		×	750	Building and consolidation.
Etowah		×	×		×		×		Normal school training.		×	1		×	900	Club work and building new schools.

Fayette		×	×		×		×				×	1		×		Club work and war savings.
Franklin		×	×			×		×	First grade		×	1		×	500	
Geneva		×	×			×		×			×	2		×	1,250	Club work and community organization.
Greene	×		×		×			×			×	3		×	500	Club work.
Hale		×	×		×			×	Normal training		×	2		×		Do.
Henry		×	×					×	5 years' experience		×	4	×			War work, club work.
Houston	×				×		×				×	1		×	300	None.
Jackson		×	×			×		×	Normal training		×	2		×	1,000	Sanitation, community work.
Jefferson		×	×		×			×	do.	×		9		×	(3)	Three-mill tax, consolidation, club work.
Lamar		×	×			×		×	do.		×	1½		×	[2] 300	School improvement work, repair.
Lauderdale	×		×		×		×				×			×	[2] 400	Community work.
Lawrence		×	×		×		×				×	5		×	500	Three-mill tax, community work.
Lee		×	×		×			×	Normal course		×			×	(1)	Agricultural work.
Limestone	×		×		×			×	First grade		×	3		×	1,200	Community work.
Lowndes		×		×	×		×			×		1		×	800	School building.
Macon	×		×		×		×				×	3		×	500	Club work.
Madison	×					×		×			×	2	×			Library and club work.
Marengo		×	×		×		×				×	2		×	300	Agriculture, club work.
Marion		×	×			×		×	Special training		×	2		×	500	Consolidation and 3 mill tax.
Marshall		×	×		×			×	First grade		×	2		×	(1)	Illiteracy.
Mobile	×		×		×		×		Normal training		×			×	1,700	
Monroe		×	×		×		×		Active teachers		×	4	×			Building and repairing.
Montgomery		×	×		×			×	Normal training		×	13	×		(1)	Club work.
Morgan	×		×		×			×	First grade		×	4		×		Truck gardening.
Perry		×	×		×		×				×	4		×	500	
Pickens	×				×			×	First grade		×	3	×			Health campaign.
Pike	×		×			×	×				×			×	(1)	Club work and consolidation.
Randolph	×		×		×		×				×	2		×	600	Club work.
Russell		×	×		×			×			×	5		×	(1)	Do.
Shelby	×		×		×			×	Normal training		×	1		×	500	
St. Clair		×	×			×		×	First grade		×	3		×	500	
Sumter	×		×		×			×	do.		×	3		×	200	
Talladega	×			×	×			×	Certificate		×	1		×	500	Do.
Tallapoosa		×	×			×					×	1⅓		×	500	Do.
Tuscaloosa		×		×		×		×	Normal training		×			×	1,000	Community work and health.
Walker		×	×		×			×	do.		×	3		×	500	Community clubs.
Washington		×	×		×			×	Life grade		×	1		×	[2] 300	Club work.
Wilcox		×	×		×		×				×	1	×			Three-mill tax and club work.
Winston		×	×		×			×			×	2		×	500	

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[1] Expenses paid.

[2] And expenses.

[3] Traveling expenses paid.

A careful study of the table will disclose that with few exceptions[1] the hold-over superintendents are the poorest paid, have the least supervisory and clerical help, and work on the meagerest annual budgets. This becomes more significant when it is known that of the 24 superintendents who hold academic or professional degrees only 5 hold-over superintendents hold such degrees.

Great importance of the superintendency requires superior educational qualifications and successful experience.—Educators are generally agreed now that the rural schools can be made into satisfactory educational institutions for America's rural population, (1) through organization into community schools of the consolidated or one-teacher type (see Chapter VII), (2) through close professional supervision. Both of these are possible under the new organization. The old-time superintendent was looked upon as little more than a functionary whose business it was to visit schools, make statistical reports, and help out in occasional teachers' institutes. Not so now. The superintendent is the professional representative of the county board in its important tasks in financing, organizing, and rebuilding schools, in selecting teachers and in directing these teachers in classroom and community activities. He should be an agricultural expert, a general rural life expert, understanding and sympathizing with the needs of modern rural life. No person of meager academic and professional preparation and limited experience can fill this important office satisfactorily.

In general the county superintendent should be a person of unlimited energy, be a good mixer, and have the tact to get along with people. He should have foresight and imagination to see and plan progressive things for the schools. He should have good knowledge of men and women "and the ability to compel willing and loyal support from them."

In a specific way the Alabama county superintendents should be required to possess academic and professional education at least equivalent to graduation from the standard normal schools of the State and to have had three years' successful experience in teaching (the higher the standard of qualification the better). He should also hold a county superintendent's professional certificate issued by the State department of education and based on (1) general education, (2) known administrative ability, (3) known supervisory success, (4) general personality and force of character, (5) general professional spirit. This would give the county boards of education a definite basis on which to act when they are called upon to select the superintendent.

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[1] Mobile County is a hold-over county which should not be considered in this category, as it had the equivalent of a county unit organization for many years before 1915, having been organized under special legislative enactment. Because of this organization it has long been the "model county" of the State.

An effective county school organization.—Whether it be in Alabama or in some other State, the county school organization, to be thoroughly effective, must make provision for a well centralized business administration without depriving the people of their local initiative in school matters. The county board and the county superintendent should administer the general school affairs and equalize educational advantages to all the people of the county, expending the school funds of the county for the general maintenance of all the schools. Each school community or school district should be represented by at least one local trustee appointed by the county board of education or elected by the legal voters of the district, with the provision that all incorporated towns and cities above 1,000 population shall select their own local boards of education, and have the right both to levy taxes and to issue bonds for extraordinary school purposes, such as acquiring additional land sites, erecting new buildings, etc. This is a guaranty of local autonomy and local interest.

Figure 4 shows what the "amplified" Alabama county organization should be for educational efficiency. The county board of education should not put all the burden of administration on the shoulders of the county superintendent and his professional staff. The board ought to be on intimate terms with the local trustees (who under the present law have been ignored in some counties), with the attendance officer (who has an important function in the school system), with the county board of health, and with the county school nurse or director of school health, which latter official is indispensable in a well-planned county system; and through these persons the county boards must be on terms of acquaintanceship with the parents and homes in the county.

However, the board of education should never undertake details of administration which belong to the superintendent and his assistants. The county superintendent, finally, must be supplied with a staff of assistant superintendents and subject supervisors, in order to give his schools real supervision. These supervisors, like the county superintendent, should have professional qualifications and teaching gifts commensurate with the importance of their positions.

Reorganization for closer and more effective county supervision.—Good beginnings have been planned for expert school organization and supervision of the rural and village schools in Alabama. It is imperative to strengthen and enlarge these beginnings; to this end the survey committee recommends:

1. Requirement that all candidates for county superintendent, not including the present incumbents, shall have minimum academic and professional qualifications equivalent to graduation from the standard (class A) normal schools of the State, and at least three years' successful experience as teacher or supervisor in this or other States, and

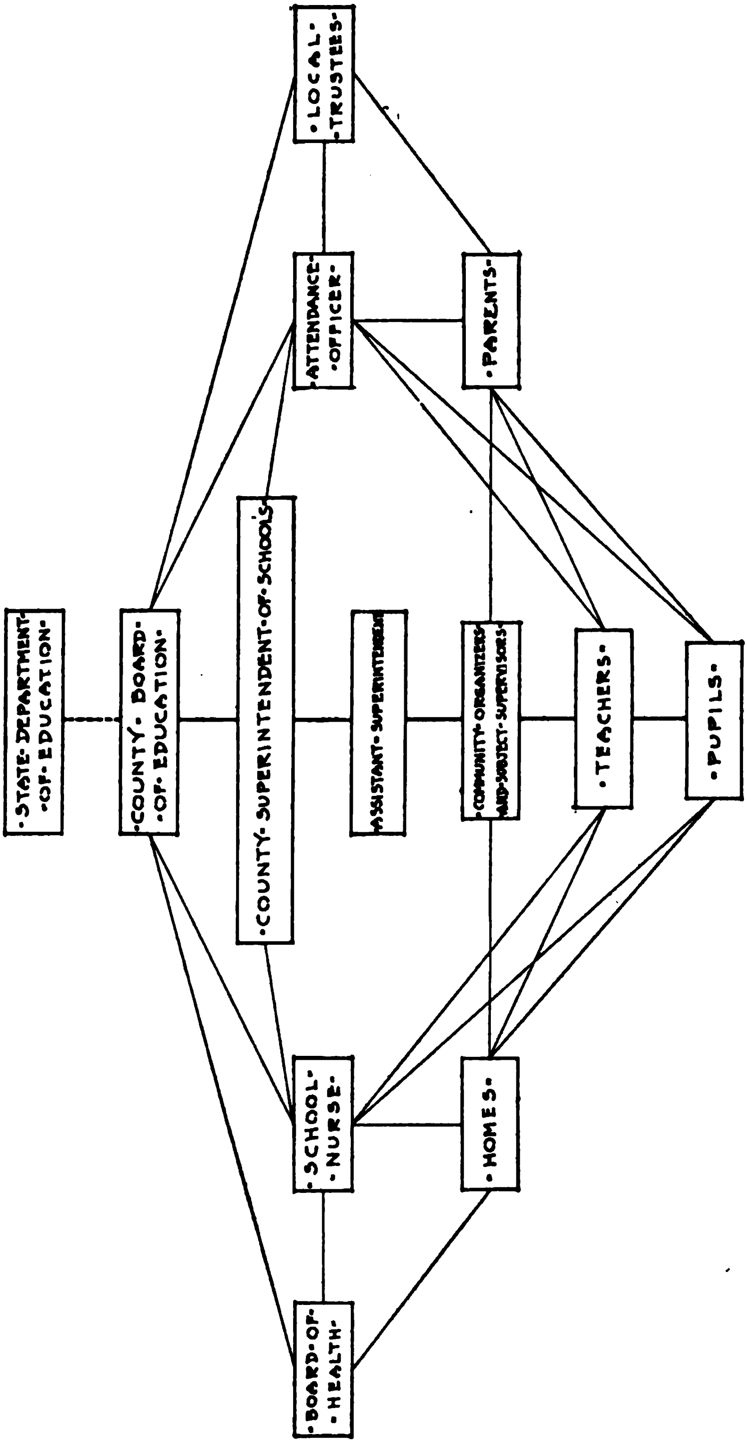

STATE DEPARTMENT OF EDUCATION
COUNTY BOARD OF EDUCATION
COUNTY SUPERINTENDENT OF SCHOOLS
ASSISTANT SUPERINTENDENT
COMMUNITY ORGANIZERS AND SUBJECT SUPERVISORS
TEACHERS
PUPILS
LOCAL TRUSTEES
ATTENDANCE OFFICER
PARENTS
SCHOOL NURSE
HOMES
BOARD OF HEALTH

FIG. 4.—Proposed enlargement of the county board of education in Alabama.

hold, at the time of the appointment to office, a professional county superintendent's certificate issued by the State department of education on the basis of the foregoing qualifications, and ample evidence that the candidate (1) is an able administrator, (2) is of strong personality and good character, (3) has exceptional professional spirit.

2. Requirement that no person shall hereafter be appointed as assistant superintendent or subject supervisor who does not hold a State professional certificate valid in Alabama.

3. Appointment of an assistant county superintendent in each county employing 100 or more teachers, and a subject supervisor in each county for every 50 teachers or fraction thereof.

4. Maintenance of high standards among the county superintendents and their assistants—

(*a*) By holding an annual "school" of one week's duration under charge of the State superintendent for all the county superintendents, this provision to be made mandatory and all traveling and living expenses to be defrayed from county educational funds.

(*b*) By granting county superintendents and their assistants leave at full pay to attend summer school every second or third year.

(*c*) By furnishing at State expense each county superintendent for his own use, or the use of his assistants, one-half dozen or more of the leading educational books of the year.

5. Amendment of the present county board law to provide that all incorporated towns and cities above 1,000 population shall select their own local boards of education, and be authorized to issue bonds for extraordinary purposes, such as acquiring additional land sites, erecting new buildings, etc., in addition to the right of levying the present three-mill district tax.

Chapter VI.

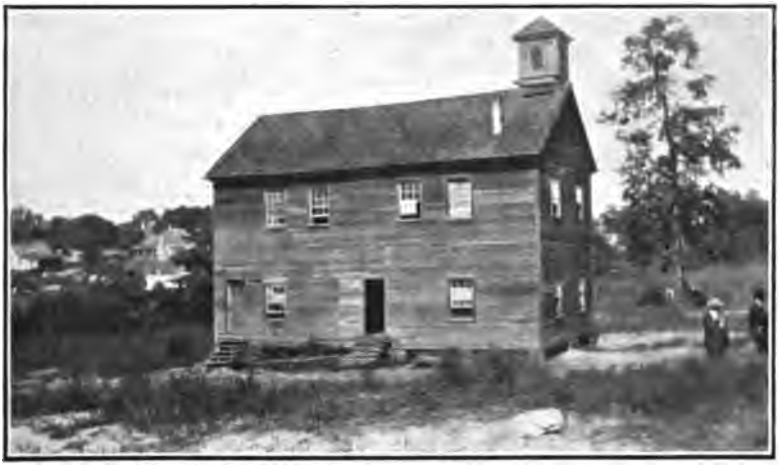
SCHOOL POPULATION, ENROLLMENT, AND ATTENDANCE.

Effectiveness of a school system determined by how fully it is utilized.—The effectiveness of a school system can be determined to a large extent by the degree to which it is utilized by the public. If the system is well organized and carefully administered and supervised, a large proportion of the school population may be expected to enroll. If the teachers in charge are well prepared and have the ability to sustain good interest in school work, and the course of study is well adapted to community needs, a good per cent of the enrollment will be in daily attendance; but if on the other hand the people of the State fail to make full use of the schools established for their children, as indicated by a low rate of enrollment and irregular attendance, it is reasonable to assume that the schools have failed to attract and hold the children and their parents, because they have failed to provide the type of education required by that particular community.

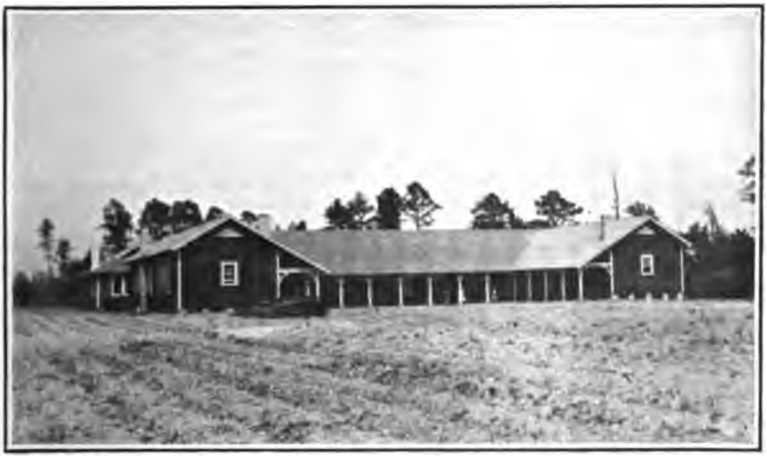
On this basis it will appear that the State of Alabama ranks low in sustained school interest; and, considering the small number of children making daily use of them, the schools cost the State high. Poor schools are always expensive schools.

The school population.—The total school population of Alabama is (in 1918) 769,808, which embraces all persons over 7 and under 21 years of age. Of this number, 454,478 are white and 315,430 colored. It appears, however, that many Alabama children enter school at 6 years of age and some at 5; but very few remain in the elementary or secondary schools beyond 18 years of age. Normally, children should enter school when they have finished their sixth year and they should complete the twelfth year—the last year of high school—in their eighteenth year. In Alabama the public school course is intended to cover only 11 years. Children entering at the legal age of 7 should graduate at 18. The normal school age in a large majority of the States is 6 to 18, inclusive, and should be made so for Alabama.

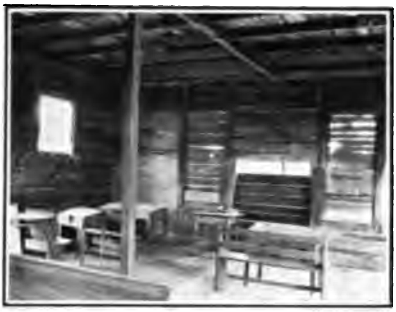
The State makes provision for a biennial school census; the last census was taken in 1918. Figure 5 tells in a graphic manner the increase and decrease in school population by races. The white school population is seen to have grown steadily from about 390,000 in 1910 to about 454,000 in 1918. This indicates a healthy growth in white



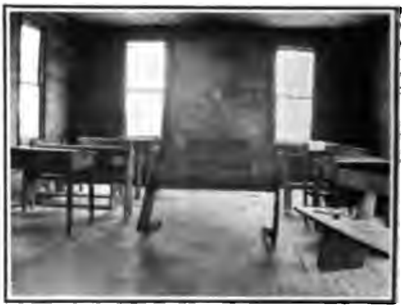
A. A NEGRO SCHOOL IN ONE OF THE LARGER ALABAMA TOWNS.



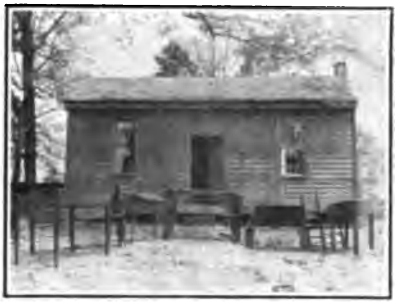
B. MOBILE COUNTY TRAINING SCHOOL FOR NEGROES.



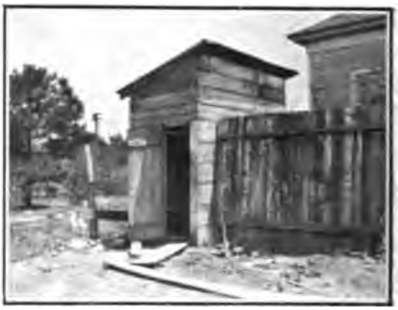
A. A dilapidated school building with homemade furniture, in Montgomery County.



B. A badly lighted and badly furnished schoolroom.



C. These homemade desks and benches are the entire equipment of this school.



D. This outbuilding serves the school of an aristocratic suburban community.

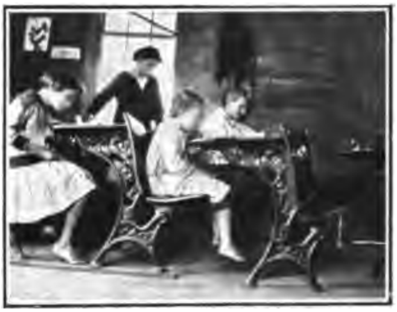
E. There can not be much inspiration in teaching such a four-grade school as this.

F. Five grades in this small school.

A. An antiquated school interior.

B. Attractive white children in a ramshackle school building.

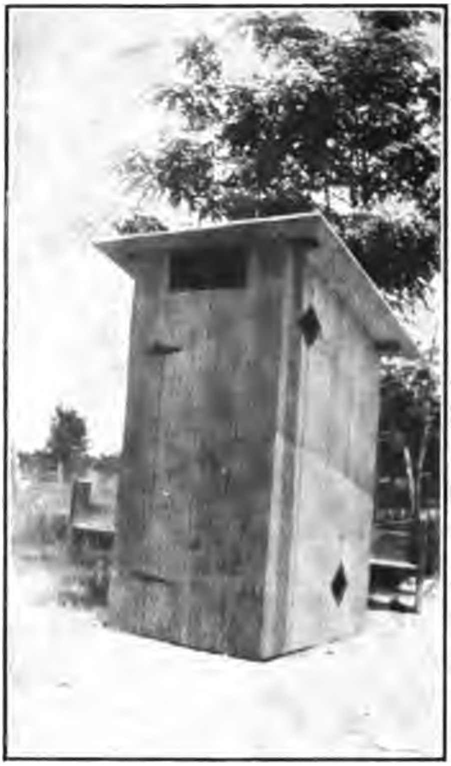
C. An old cabin used for a school.



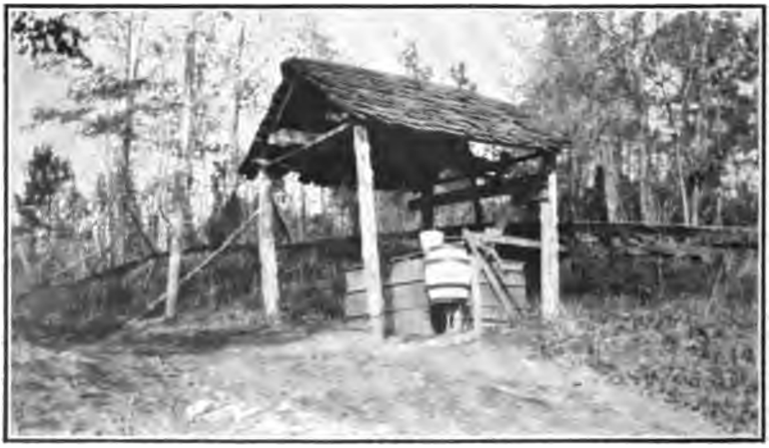
D. Note the seating of these children.

E. Typical of the poorer kind of school.

F. This schoolhouse was a Negro cabin.



A. A BETTER TYPE OF OUTDOOR TOILET IN ESCAMBIA COUNTY.



B. OPEN STOCK WELL SUPPLYING A NEAR-BY RURAL SCHOOL.

population as a whole. The broken line, for colored children, tells a different story. Up to 1914 the colored school population grew

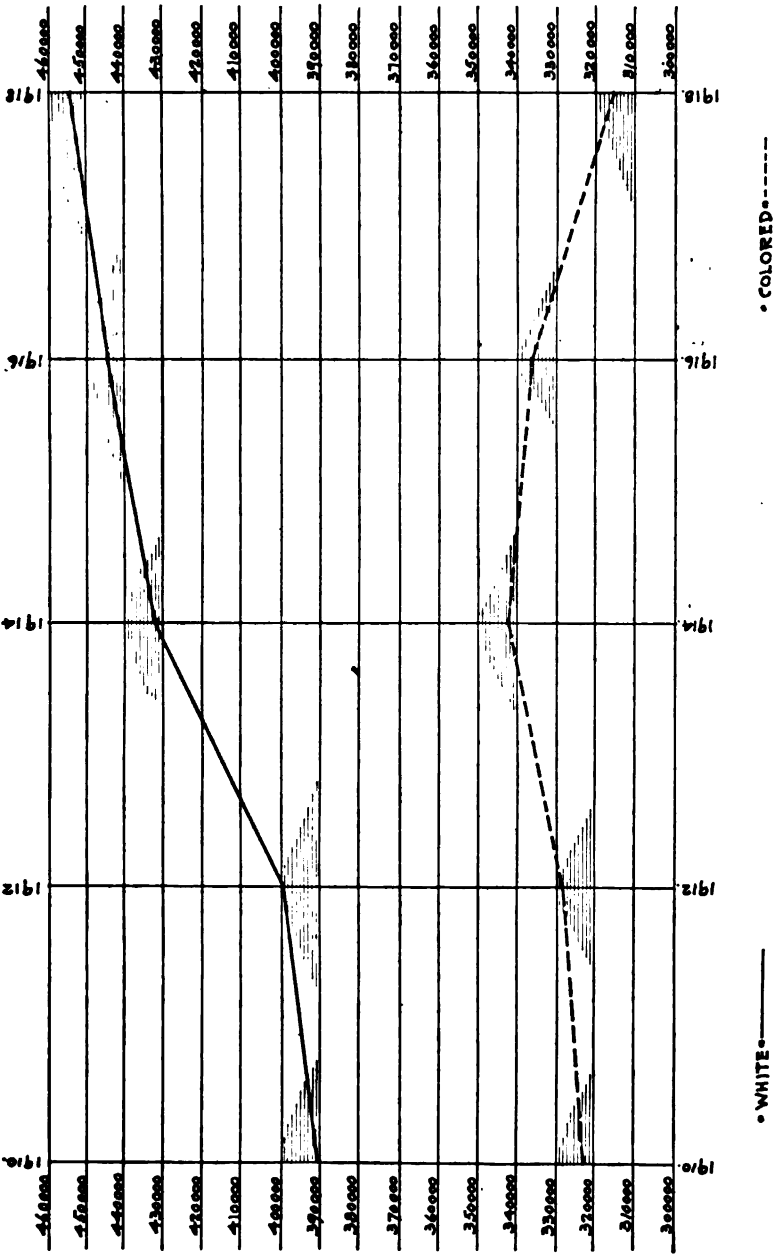
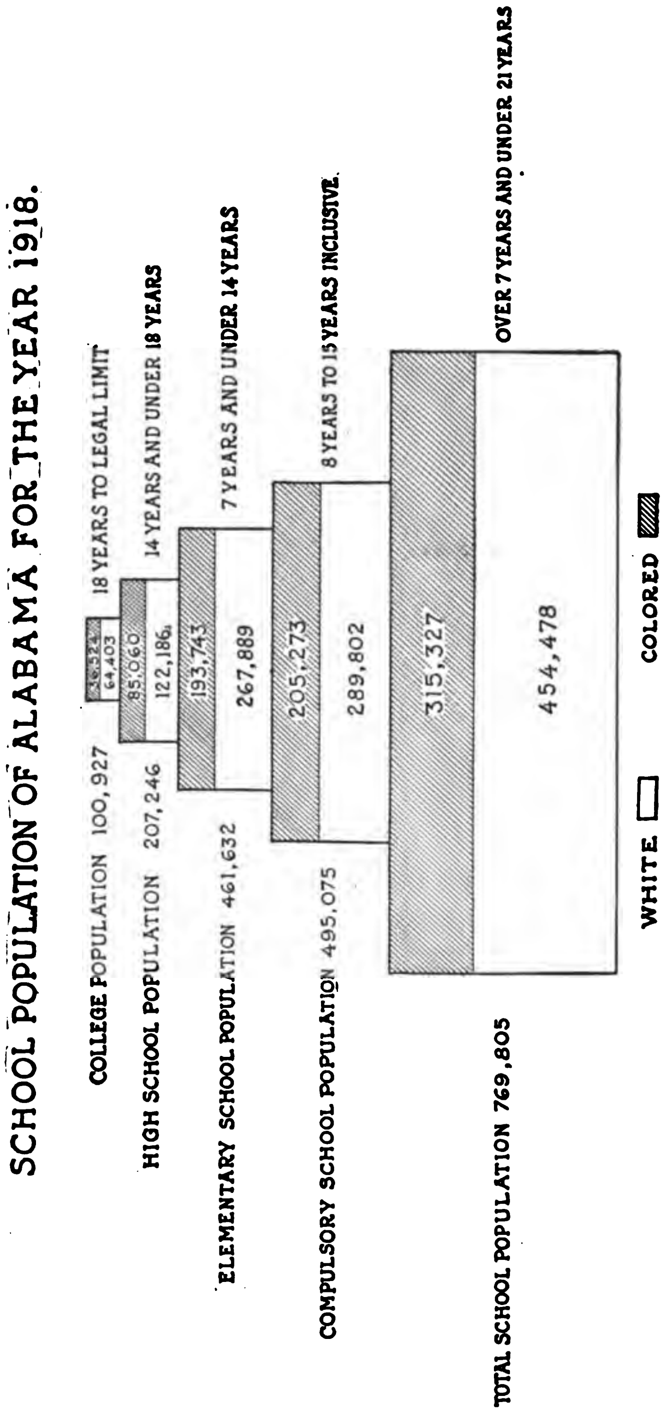


Fig. 5.—Ebb and flow in school population by races.

steadily, although not so rapidly as the white; but with the outbreak of the European war, the northern labor demands began to draw



SCHOOL POPULATION OF ALABAMA FOR THE YEAR 1918.

Fig. 6.

many colored families from the State. Then, in 1916, unprecedented floods swept the State and the boll weevil added to the disaster. These helped to swell the northward movement to the dimensions of a real migration. The last four years have probably reduced the colored population by 100,000 persons, including a school population of about 37,000.

Figure 6 gives this school population and divides it as compulsory attendance population, and elementary, secondary, and college population. This graph also contains the total school population on which the State bases its school apportionment—a thing that is clearly unfair, since many of the persons included as "school population" are well past their school life, already having taken upon themselves life responsibilities as married people.

Figure 7 is based on the total school population in figure 6 and shows strikingly how very few children of school age actually make use of the schools provided by the State, and particularly how few children complete the elementary school and advance to high school and college. In a total census of 769,807 children in 1918, only 542,529 children are enrolled in elementary schools. Of this number 32,728[1] are in high school, and 8,039 in college and normal school. Of the persons who enter the higher institutions of learning, only a very small per cent finally graduate from college.

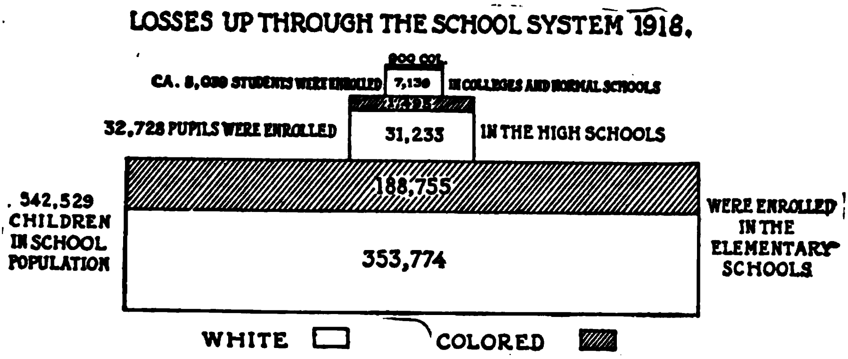


FIG. 7.

Percentage of school population.—Alabama ranks forty-third among the 48 States on the basis of school enrollment. This graph is based on 1915–16 statistics (the last available information for the whole country). It gives Alabama's public school enrollment at 69.1 per cent. The State returns for 1918 would increase this to 70 per cent, but the returns from several of the more backward counties are so obviously inaccurate (see Table 2) that it was found advisable to use, in place of them, figures for 1917, as indicated in the table. Alabama, accordingly, remains in forty-third place, with an enrollment of only 69 per cent of the school population, New Mexico, with its abnormally large Spanish-American population, and Louisiana, with its Creole element, alone, taking a lower rank.

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[1] This includes pupils attending district agricultural schools and county high schools.

Table 2 is a striking illustration of how the different counties vary in school interest, as judged by school enrollment and school attendance. For example, while certain counties have upward of 85 per cent of school population enrolled, others drop as low as 41 per cent. This indicates a very serious condition of educational indifference, for which county boards of education and county superintendents are largely responsible. It is not right to permit any county to neglect its evident duty, as has been the case with a large number of counties, as seen in Table 2. On the basis of total school population, the enrollment in one county is only 17 per cent of the total school population, and in another instance only 20 per cent of the school population. In the former case, only 1,671 children in a total school population of 9,319, and in the latter 2,676 children in a total of 12,039, are in daily attendance. To complete an elementary school course of 7 or 8 years is not too much to be expected of any citizen, but for a county deliberately to neglect to enforce the first essential in democracy, i. e., the State's educational needs, is little short of criminal. It was President James Madison who said, "A popular government without public education is but the prelude to a farce or tragedy, or both."

TABLE 2.—*School population, enrollment, and attendance by counties, 1918.*

Counties.	Total school population. 1918.	Enrolled in public schools.		Average attendance in public schools.		Attendance on basis of school population.	
		Number.	Per cent.	Number.	Per cent of enrollment.	Per cent.	Rank.
Autauga	6,824	3,855	56	2,368	61	34	58
Baldwin	6,915	5,139	74	3,003	58	43	39
Barbour	12,028	6,403	53	3,604	56	30	63
Bibb	7,737	5,873	76	3,479	59	45	32
Blount	8,964	7,247	81	5,171	71	58	6
Bullock	11,071	5,312	48	3,386	64	31	61
Butler	10,065	7,670	76	5,349	70	53	11
Calhoun	16,919	9,976	59	6,305	63	32	60
Chambers	14,592	9,844	67	6,856	70	47	22
Cherokee	7,218	5,516	76	3,108	56	43	40
Chilton	7,635	6,100	80	4,600	75	60	4
Choctaw	7,089	4,966	70	3,401	68	48	20
Clarke	9,450	5,604	59	4,175	74	44	36
Clay	7,728	6,351	82	3,291	52	43	41
Cleburne	4,654	3,912	84	2,122	54	46	25
Coffee	10,430	7,743	74	4,846	63	46	26
Colbert	10,038	6,920	69	3,932	57	39	48
Conecuh	8,408	6,706	80	4,431	66	53	12
Coosa	5,127	4,345	85	3,340	77	65	1
Covington	11,873	9,946	84	5,573	56	47	23
Crenshaw	8,326	5,720	69	3,271	57	39	49
Cullman	11,336	9,204	81	6,276	68	55	9
Dale	7,900	5,328	67	4,096	77	51	14
Dallas	18,023	9,374	52	6,965	74	39	50

TABLE 2.—*School population, enrollment, and attendance, etc.—Continued.*

Counties.	Total school population. 1918.	Enrolled in public schools.		Average attendance in public schools.		Attendance on basis of school population.	
		Number.	Per cent.	Number.	Per cent of enrollment.	Per cent.	Rank.
DeKalb	11,335	9,130	77	5,152	56	44	37
Elmore	9,900	6,810	69	4,281	63	43	42
Escambia	8,058	6,044	75	3,649	60	45	33
Etowah	14,263	11,301	79	5,625	50	39	51
Fayette	5,957	5,525	[1] 69	3,687	67	62	2
Franklin	7,201	5,244	73	3,658	70	51	15
Geneva	9,778	9,677	[1] 61	4,678	48	48	21
Greene	5,607	2,228	40	2,065	92	37	54
Hale	9,324	5,064	54	2,878	57	31	62
Henry	7,051	4,856	69	2,732	56	39	52
Houston	11,155	10,590	[1] 78	6,238	58	56	8
Jackson	11,856	8,348	70	4,823	58	41	47
Jefferson	89,654	59,711	67	38,870	65	43	43
Lamar	6,507	5,953	[1] 87	3,437	58	53	13
Lauderdale	14,516	10,575	72	7,453	70	51	16
Lawrence	7,827	6,177	79	3,590	58	46	27
Lee	10,771	6,200	58	3,877	63	36	56
Limestone	10,373	7,555	73	4,592	61	44	38
Lowndes	9,805	4,660	48	3,375	72	34	59
Macon	8,649	5,721	66	3,321	58	38	53
Madison	15,522	12,142	77	7,822	64	50	17
Marengo	12,360	5,895	48	3,766	64	30	64
Marion	7,503	6,961	[1] 81	4,499	65	60	5
Marshall	11,249	9,161	81	5,157	56	46	28
Mobile	23,033	15,334	67	10,344	67	45	34
Monroe	9,430	6,883	73	4,451	65	47	24
Montgomery	27,219	15,781	58	10,050	63	37	55
Morgan	12,057	9,364	78	6,048	65	50	18
Perry	9,310	6,055	65	4,028	67	43	44
Pickens	9,350	7,544	81	3,277	43	35	57
Pike	10,484	9,213	88	4,833	51	46	29
Randolph	9,627	8,156	85	5,478	67	57	7
Russell	9,319	2,590	28	1,671	64	17	67
Shelby	8,590	6,836	80	5,307	78	62	3
St. Clair	8,203	6,776	83	3,760	55	46	30
Sumter	12,039	4,227	32	2,676	63	20	66
Talladega	12,684	10,771	85	5,840	54	46	31
Tallapoosa	10,230	10,157	79	4,427	44	43	45
Tuscaloosa	16,024	12,267	77	8,816	72	55	10
Walker	14,278	12,983	[1] 79	6,973	54	49	19
Washington	5,065	3,616	71	2,115	59	42	46
Wilcox	10,845	4,482	41	2,763	62	26	65
Winston	4,947	2,429	49	2,226	91	45	35
Total	769,805	540,051	69	337,254	63	35	....

[1] Enrollment based on 1917 report because of apparent error.

Plainly, a county which is not sufficiently awake to its responsibilities to the community in educational matters to compel all those children to enroll in school who ought to be in school should not receive State educational funds based on school population (7 to 21, inclusive). A more equitable method would be to apportion them directly on the basis of aggregate daily attendance. This is eminently fair and would probably awaken these counties to their responsibilities to the State at large.

The compulsory school attendance act.—An attendance act was passed in 1915 which aims to guarantee to every child a reasonable amount of educational opportunity in the State. The requirements of the law are low, and the machinery required for its enforcement quite inadequate. By reason of this, the school enrollment and school attendance have made no marked improvement since the law's enactment. Any law is difficult to enforce unless public sentiment is back of it. Public school education is comparatively new in Alabama and some people still cling to the select school idea and their so-called personal rights in the matter of educating their own children. This fallacious doctrine has been slow to yield to belief in personal responsibility toward the larger social group—the State. Another reason for lax enforcement of the law is stated quite frankly by many educators in the following manner: If the law were to be strictly enforced, and all children of school age (falling within the compulsory requirements) should actually appear in school, there would be neither schools nor teachers enough in the State to accommodate them. If, for example, 90 per cent of the school population should become enrolled (and this per cent can reasonably be expected under good conditions), the white teachers now in the schools would average 45 pupils each, and the colored teachers 104 each.

It will be necessary to make much greater investment in material plant, and in instructors, if the law is to be enforced; for a citizen undeniably has the right to demand of the State decent, sanitary school premises, and reasonably well-prepared teachers in return for relinquishing to the State control of his children for 6 or 7 hours daily.

These are the salient points of the law:

1. The attendance period is between the ages of 8 and 15 years inclusive.
2. The minimum attendance during such period is 80 days, although county boards of education have the authority to reduce it to 60 days for any particular school.
3. The compulsory period begins at the opening of the school in the fall, unless the county board directs otherwise.
4. These children are exempted under the law—
    - (*a*) Children who have finished the seventh grade.
    - (*b*) Children who live more than 2½ miles from the school unless transportation is furnished.
    - (*c*) Children who are physically or mentally incapacited.
    - (*d*) Children who are attending private or parochial schools.
    - (*e*) Children who are unable to attend on account of poverty.
5. Attendance officers are provided to investigate cases of nonattendance reported to them by the teachers, and to enforce school attendance.
6. Habitual truants may be committed to State institutions for juvenile offenders, and their guardians may be fined or imprisoned.

Compulsory education laws are intended to assure every child such educational opportunities as the State offers. The laws are intended to protect future citizens, and, through them, protect the State against selfish, narrow-minded, and ignorant guardians who would traffic in the labor of their children or wards, and so deprive them of equal educational opportunities with other children. Compulsory attendance laws certainly are not intended to hamper the fair-minded citizen or in any way encroach on his rights. They are merely intended to protect him and his children from the withering effects of ignorance and illiteracy common among the indifferent and selfish. The compulsory attendance laws of the State should, therefore, be so strong and free from loopholes as to give the commonwealth real protection from self-willed and calculating individuals. The Alabama law is not satisfactory in these respects. It should be amended by the present legislature in several essentials, as the following analysis shows:

1. The attendance period—8 to 15, inclusive—can be made satisfactory as soon as the minimum attendance requirement is modified and not before. What good will it do to designate a period of years as compulsory attendance period if annual attendance can be legally satisfied in 80 or 60 days of actual attendance? In practice, however, this has interfered seriously with the study plan and has hindered the progress of the rest of the school, without being of great value to the attendance child himself. The age-grade tables, shown later in this section, prove conclusively that there are large numbers of children 15 years of age and over who have not advanced beyond the first, second, or third grade. This is because these children enrolled late, or are irregular in attendance. This destructive practice should be stopped by law at once, as much for the sake of the regularly enrolled children whose work is hindered as for the attendance children themselves.

2. The minimum attendance period is 80 days and may be reduced to 60 days. The trend of the times is to make the schools long-time schools, keeping open 9 or more months in the year. States that have had compulsory laws for a period of years are gradually learning to make the "attendance period" correspond to the regular school year so that, during the compulsory attendance years, children must attend school throughout the regularly appointed school term. This is none too much, but it would make it possible for the average citizen to complete at least the 7-year elementary education, without which Alabama can not expect that degree of intelligent leadership which the State has reason to expect of all its citizens. The survey committee is convinced that the 80 and 60 day minimum attendance clauses should be dropped, and all children of compulsory

attendance age be required to attend throughout the regular school term. Furthermore, work permits should be issued only on educational requirement equivalent to completion of the fourth grade instead of as now a minimum of 60 days' attendance during the previous year.

3. In the matter of exemptions—

(*a*) Children who have completed the elementary school course and hold the county superintendent's certificate to this effect should be excused from further legal attendance.

(*b*) Children who live more than 2½ miles from school should not on that account be excused. It is the business of educational authorities to see to it that these children get equal educational advantages with their neighbors. Until it becomes feasible to provide accessible schools, transportation should be provided at public expense, or the children be boarded at public expense near a neighboring school.

(*c*) Children should not be exempted on the plea of poverty. The State should, if investigation disclosed the necessity, furnish books; and in any Alabama county the people will certainly find sufficient clothing to enable any child to attend school if their attention is called to the need.

(*d*) The most searching examination should precede granting of exemptions on the plea that the children's work is needed at home, or to support other members of the family. This excuse is often abused and forms, perhaps, the most serious loophole in the law.

4. In general, the provisions for enforcing the law have not the necessary "punch" for successful enforcement. No one person is seemingly responsible for the enrollment and attendance of the children. Provisions should be made for a chief attendance officer responsible ultimately to the State department of education to direct the county boards of education and county superintendents and local attendance officers and teachers in their efforts to bring the school population into school. In him should be vested the ultimate authority and responsibility. He should also direct the biennial school census.

School enrollment and attendance.—An effective school system not alone enrolls a large per cent of the children, but it holds all who are physically and mentally fit to daily attendance until they have at least finished the elementary course. Inclement weather, bad roads, long distance to school, and, particularly, lagging interest in school studies contribute to irregularity of attendance. In an efficient school system schools are organized wherever they are needed, and the school work is made interesting and attractive enough to sustain in the child a desire to be regular in attendance.

Alabama is contending against many difficulties and can not be expected to provide anything like ideal school conditions for some years; but even after accounting for such handicaps as a two-race school system and meager school support school attendance is very unsatisfactory. This is graphically illustrated in figure 8, which shows that, in addition to an enrollment of only 69 per cent of the whole school population, 63 per cent of this enrollment only is in daily attendance and 35 per cent only of the whole school population. This condition calls for serious consideration and early remedy.

Viewed in the light of the nation as a whole, Alabama ranks forty-third in attendance and forty-third in enrollment. This is undeniably additional argument in favor of changing the constitutional provision which apportions State school funds on the school population to an aggregate attendance basis. This would be a great inducement to boards of education and school communities to enroll and hold in school a large per cent of the school population in order that they might get in return a good share of the State educational funds.

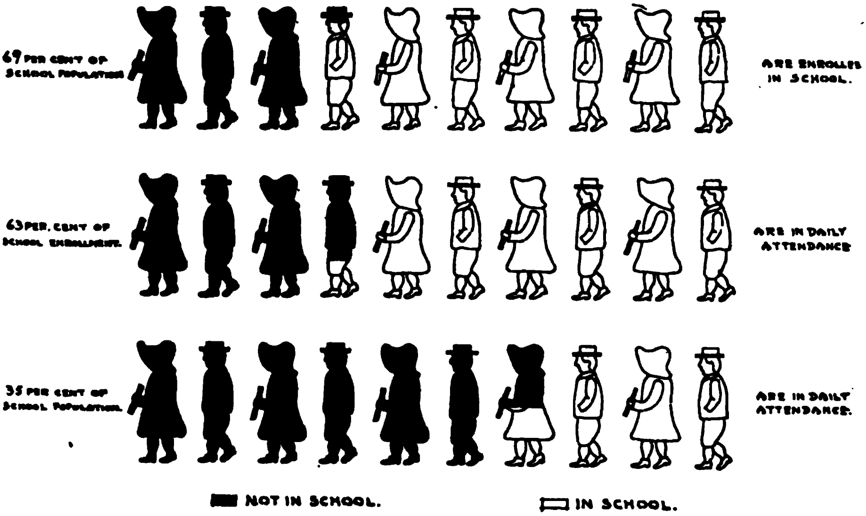


FIG. 8.—School population, enrollment, and attendance, 1918.

Age-grade records.—Normal children, who in Alabama enter school at 7 years of age, are expected to advance one grade a year and finish the seventh year of the elementary school at the age of 14. If the children enroll at later than 7 they can not expect to complete the course at 14; likewise, if they are irregular in attendance, the same condition will prevail. The survey committee has gathered data on 253,433 children, white and colored, in all kinds of schools, to ascertain how early the children actually enter school and how well sustained is their continuance in school. Tables 3, 4, and 5 give the enrollment, by years, for white children in rural, village (places below

2,000 people), and city schools. The double columns, embraced between the heavy black lines, contain the "normal age" pupils; i. e., pupils who are in classes where they normally belong if they entered school at 7, and have advanced one grade a year since that time. Those to the left and below these lines are "under age," or ahead of their classes because they are younger than they should be in their respective classes. For the same reason, all to the right and above the heavy lines are "over age," or behind in their classes.

A first glance at the tables shows that many children enter school before they are 7, indeed almost as many as would have entered if the law of entrance had read "six years." In this respect the State law should be changed to comply with the popular demands which, in this instance, coincide with the natural school age. For whether or not the State changes the entrance age from 7 to 6, the children will manage some way to gain admittance to school.

TABLE 3.—*White schools—Rural.*

AGE-GRADE OF PUPILS.

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	1,972	6,511	7,531	4,693	3,604	1,532	842	495	290	116	58	30	11	8	26,693
II	81	762	1,941	2,894	2,602	1,954	1,159	676	447	209	64	33	7	2	12,831
III	.....	72	480	1,709	2,727	2,392	1,908	3,336	775	389	221	77	11	6	14,103
IV	.....	3	69	529	1,486	2,439	2,387	2,069	1,527	852	486	217	66	34	12,164
V	.....	.....	8	73	368	1,135	1,846	1,956	1,758	1,194	788	336	119	77	9,658
VI	.....	.....	.....	12	72	278	894	1,523	1,640	1,611	1,142	680	310	194	8,356
VII	.....	.....	.....	.....	7	45	215	566	1,005	1,342	1,276	1,132	702	545	6,835
VIII	.....	.....	.....	.....	.....	26	95	233	404	494	557	390	311	86	2,596
Total of ages	2,053	7,348	10,029	9,910	9,866	9,801	9,346	10,854	7,846	6,207	4,592	2,895	1,537	952	93,236

TABLE 4.—*White schools—Places below 2,000 population.*

AGE GRADE OF PUPILS.

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	360	1,883	3,086	1,670	1,028	555	287	184	112	61	18	10	6	3	9,263
II	18	177	1,240	1,507	1,097	627	379	200	143	72	29	11	3	.....	5,503
III	.....	83	289	930	1,247	945	655	469	267	118	79	89	7	5	5,083
IV	.....	.....	48	215	839	1,238	872	745	484	290	236	62	17	4	5,050
V	.....	.....	.....	67	225	755	1,005	832	606	369	248	61	29	8	4,205
VI	.....	.....	.....	6	68	212	622	927	748	570	338	165	56	22	3,734
VII	.....	.....	.....	.....	2	20	168	541	805	669	574	304	171	61	3,315
VIII	.....	.....	.....	.....	.....	.....	15	133	307	490	398	344	217	175	2,079
Total of ages	378	2,093	4,663	4,395	4,506	4,352	4,003	4,031	3,472	2,639	1,920	996	506	278	38,232

TABLE 5.—*White schools—cities.*

AGE-GRADE OF PUPILS.

ELEMENTARY SCHOOL.

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	19 years and over.	Total by grades.
I	249	1,479	3,710	1,857	634	323	145	87	27	8	23	12	....	....	....	8,554
II	22	217	1,441	2,238	1,266	682	345	181	83	43	11	4	....	1	....	6,534
III	....	27	142	886	2,127	1,492	687	443	217	117	47	11	....	....	....	6,196
IV	....	4	49	188	1,120	1,913	1,464	782	465	232	79	22	5	....	....	6,323
V	....	.....	6	59	314	987	1,611	1,319	764	353	137	48	9	2	....	5,609
VI	....	.....	.....	.....	54	243	968	1,420	1,126	642	284	76	11	2	....	4,826
VII	....	.....	.....	.....	4	35	191	687	1,210	954	486	177	61	4	....	3,809
Total	271	1,727	5,348	5,228	5,519	5,675	5,411	4,919	3,892	2,349	1,067	350	86	9	....	41,851

HIGH SCHOOL.

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	19 years and over.	Total by grades.
First year	....	.....	.....	.....	.....	.....	25	160	603	1,116	827	449	132	31	6	3,349
Second year	....	.....	.....	.....	.....	.....	.....	10	122	424	655	484	286	3	35	2,015
Third year	....	.....	.....	.....	.....	.....	.....	.....	.....	69	207	383	219	80	9	967
Fourth year	....	.....	.....	.....	.....	.....	.....	.....	.....	78	176	174	249	156	72	905
Total	....	.....	.....	.....	.....	.....	25	170	725	1,687	1,865	1,490	882	270	122	7,236

A few pupils listed in fifth year of high school not included.

Tables 6, 7, and 8 give the age grades of colored children in rural, village, and city schools:

TABLE 6.—*Colored schools—rural.*

AGE-GRADE OF PUPILS.

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	728	4,264	4,060	3,179	2,518	1,646	1,170	796	429	342	162	79	58	25	19,456
II	35	307	800	1,359	1,565	1,253	1,131	987	677	338	157	55	23	10	8,697
III	....	42	191	410	738	924	1,056	1,051	850	610	358	115	55	14	6,414
IV	....	.....	54	79	298	515	716	924	1,028	834	523	322	149	43	5,485
V	....	.....	.....	13	64	160	281	471	604	616	527	324	175	70	3,305
VI	....	.....	.....	.....	6	44	73	135	272	308	343	225	190	114	1,710
VII	....	.....	.....	.....	.....	.....	24	49	57	95	124	119	77	55	600
VIII	....	.....	.....	.....	.....	.....	.....	27	38	73	76	68	60	70	412
Total of ages	763	4,613	5,105	5,040	5,189	4,542	4,451	4,440	3,955	3,216	2,270	1,307	787	401	46,079

TABLE 7.—*Colored schools—Places below 2,000 population.*

AGE-GRADE OF PUPILS.

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	286	1,638	1,621	1,179	727	460	331	237	109	94	43	22	10	5	6,762
II	7	83	323	566	556	464	296	299	137	94	42	22	6	4	2,899
III	....	17	56	267	380	365	405	310	290	135	74	33	14	10	2,356
IV	....	2	2	42	196	280	421	367	313	271	164	62	26	17	2,163
V	....	....	....	11	34	99	205	290	296	277	189	82	56	21	1,560
VI	....	....	....	2	10	32	122	155	242	191	219	117	51	26	1,167
VII	....	....	....	....	....	9	35	43	104	119	123	138	61	42	674
VIII	....	....	....	....	....	....	....	28	39	51	76	83	89	68	434
Total of ages	293	1,740	2,002	2,067	1,903	1,709	1,815	1,729	1,530	1,232	930	559	313	193	18,015

TABLE 8.—*Colored schools—Cities.*

AGE—GRADE OF PUPILS.

ELEMENTARY SCHOOL.

Grades.	Under 6.	Over 6 years, up to 7.	Over 7 years, up to 8.	Over 8 years, up to 9.	Over 9 years, up to 10.	Over 10 years, up to 11.	Over 11 years, up to 12.	Over 12 years, up to 13.	Over 13 years, up to 14.	Over 14 years, up to 15.	Over 15 years, up to 16.	Over 16 years, up to 17.	Over 17 years, up to 18.	Over 18 years, up to 19.	19 years and over.	Total, by grades.
I	79	1,234	2,176	1,527	1,027	636	454	246	140	39	10	3	2	2	6	7,581
II	....	106	491	671	677	981	450	374	831	54	34	11	2	1	....	4,683
III	....	6	130	371	533	630	559	451	335	168	74	13	6	1	....	3,297
IV	....	....	15	98	281	386	476	512	396	274	125	51	30	4	....	2,648
V	....	....	....	7	66	178	295	368	431	269	224	58	12	1	....	1,909
VI	....	....	....	....	10	52	126	159	292	240	141	59	30	9	....	1,118
VII	....	....	....	....	....	6	30	105	83	177	174	88	36	14	....	713
Total	79	1,346	2,812	2,674	2,614	2,869	2,390	2,215	2,508	1,221	782	283	118	82	6	21,949

HIGH SCHOOL.

Grades.	Under 6.	Over 6 years, up to 7.	Over 7 years, up to 8.	Over 8 years, up to 9.	Over 9 years, up to 10.	Over 10 years, up to 11.	Over 11 years, up to 12.	Over 12 years, up to 13.	Over 13 years, up to 14.	Over 14 years, up to 15.	Over 15 years, up to 16.	Over 16 years, up to 17.	Over 17 years, up to 18.	Over 18 years, up to 19.	19 years and over.	Total, by grades.
First year	....	....	....	....	....	....	29	36	98	126	111	58	46	5	....	509
Second year	....	....	....	....	....	....	25	12	31	47	56	34	16	2	....	223
Third year	....	....	....	....	....	....	....	....	31	44	70	42	21	11	....	222
Fourth year	....	....	....	....	....	....	....	....	....	37	55	36	26	13	40	207
Total	....	....	....	....	....	....	54	48	160	254	292	170	112	31	40	1,161

Tables 9 and 10 show conclusively that, (1) an overwhelming number of school children are over age, and thus behind the grades in which they normally belong, and that, (2) the wastage and losses up through the grades are regrettably large. To be more specific, in Table 9 we find that in an enrollment of 126,793 white rural and village children, only 5.5 per cent are ahead of their grades, and 40.1 per cent are classified as normal, while 54.4 per cent are over age—in other words, that more than one-half of all the children in these schools are laggards, and this mainly because of late entrance and poorly sustained attendance. Conditions are considerably better in city schools, as is shown in Table 10. Here 4.3 per cent are under age, and 52.1 per cent are of normal age, and 43.6 per cent over age. In normal age the city schools show an improvement over the rural school of exactly 12 per cent. This indicates the superiority in organization and general efficiency of Alabama's city schools over the village and rural schools.

TABLE 9.—*Rural and village children under normal age, of normal age, and over age. (White schools.)*

Grades.	Number in each grade.			Total in each grade.	Per cent in each grade.		
	Under age.	Normal age.	Over age.		Under age.	Normal age.	Over age.
I	2,332	19,011	14,613	35,956	6.5	52.9	40.6
II	1,038	7,582	9,714	18,334	5.7	41.3	53.0
III	874	6,613	11,699	19,186	4.6	34.4	61.0
IV	864	6,002	10,348	17,214	5.0	34.9	60.1
V	741	4,741	8,381	13,863	5.3	34.2	60.5
VI	648	3,966	7,476	12,090	5.4	32.8	61.8
VII	457	2,917	6,776	10,150	4.5	28.7	66.8
Total	6,954	50,832	69,007	126,793	5.5	40.1	54.4

TABLE 10.—*City children under normal age, of normal age, and over age. (White schools.)*

Grades.	Number in each grade.			Total in each grade.	Per cent in each grade.		
	Under age.	Normal age.	Over age.		Under age.	Normal age.	Over age.
I	249	5,189	3,116	8,554	2.9	60.6	36.5
II	239	3,679	2,616	6,534	3.7	56.3	40.0
III	169	3,013	3,014	6,196	2.7	48.6	48.7
IV	241	3,033	3,048	6,323	3.8	48.	48.2
V	379	2,598	2,632	5,609	6.8	46.3	46.9
VI	297	2,388	2,141	4,826	6.2	49.5	44.3
VII	230	1,897	1,682	3,809	6.	49.8	44.2
Total	1,804	21,797	18,250	41,851	4.3	52.1	43.6

Tables 11 and 12 give, on the percentage basis, the "under age," "normal age," and "over age" ratings of these colored children.

It will be readily noticed that conditions are much worse among the colored school population than among the white. Table 11 shows that only 30.4 per cent of the 63,248 colored rural and village children are of normal age, while the unusally large number of 66.1 per cent are over age. When applied to the city children (Table 12), it is found that 32.3 per cent are of normal age, and 65 per cent over age. This condition is serious. It shows definitely that the colored school population is neglected. No one seems interested in the enforcement of the compulsory attendance act so far as the Negroes are concerned. Indeed, if the law were enforced, it would soon appear that the State has not the material equipment, nor the teachers, to take care of this school population. Many superintendents have shown a startling indifference to the colored rural schools. Under the old régime, prior to 1915, some county superintendents did not even pretend to supervise the colored schools. Now conditions are better, but far from what they should be. Not much can be expected in the way of efficiency so long as the school system permits its enrolled school children to come and go much as they please. Not until strict measures are taken to enforce a better enrollment and greater regularity of attendance can the overwhelming age-grade retardation be remedied.

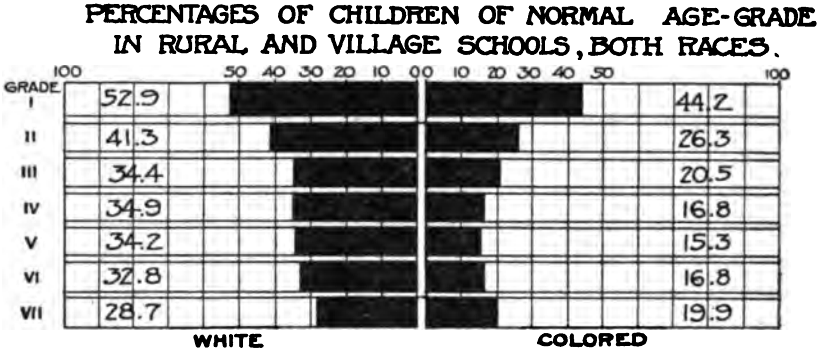


FIG. 9.

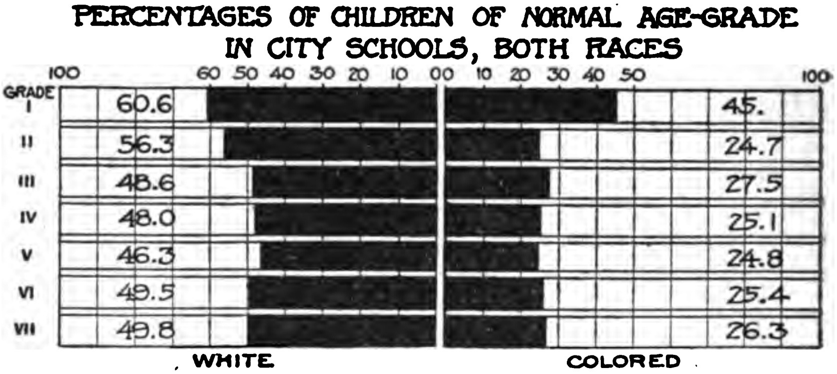


FIG. 10.

TABLE 11.—*Rural and village children under normal age, of normal age, and over age. (Colored schools.)*

Grades.	Number in each grade.			Total in each grade.	Per cent in each grade.		
	Under age.	Normal age.	Over age.		Under age.	Normal age.	Over age.
I	1,014	11,583	13,621	26,218	3.9	44.2	51.9
II	432	3,048	8,116	11,596	3.7	26.3	70.0
III	306	1,795	6,669	8,770	3.5	20.5	76.0
IV	179	1,289	6,180	7,648	2.4	16.8	80.8
V	122	745	3,998	4,865	2.5	15.3	82.2
VI	94	485	2,298	2,877	3.2	16.8	80.2
VII	68	253	953	1,274	5.3	19.9	74.8
Total	2,215	19,198	41,835	63,248	3.5	30.4	66.1

TABLE 12.—*City children under normal age, of normal age, and over age. (Colored schools.)*

Grades.	Number in each grade: Under age.	Normal age.	Over age.	Total in each grade.	Per cent in each grade. Under age.	Normal age.	Over age.
I	79	3,410	4,092	7,581	1.	45.	54.
II	106	1,162	3,435	4,703	2.3	24.7	73.
III	136	904	2,237	3,277	4.1	27.5	68.4
IV	113	667	1,868	2,648	4.3	25.1	70.5
V	73	473	1,363	1,909	3.8	24.8	71.4
VI	62	285	771	1,118	5.6	25.4	69.
VII	36	188	489	713	5.	26.3	68.7
Total	605	7,089	14,255	21,949	2.7	32.3	65.

Wastage up through the grades.—Figure 11 is a pyramidal arrangement illustrating the loss of pupils up through the grades. It is based on the reports of 253,433 pupils. Grade 1 contains 78,309 pupils, white and colored. Grade 2 contains 41,157 pupils. The number finally drops to 15,948 in the seventh year, or about one-fifth of the number given in the first grade.

Length of school year.—The next question is, how many days in the year are the schools open for school purposes, and how does the length of the Alabama school year compare with school terms in other States? Table 13 answers the first query, and figure 12 the second. The school year has practically stood still for 4 years, so far as length is concerned. City schools for white children average nearly 9 months in length; the other schools have terms altogether too short for a standard school year's work.

TABLE 13.—*Length of school term, in days.*

Years.	Rural. White.	Rural. Colored.	Urban. White.	Urban. Colored.	Combined. White.	Combined. Colored.
1917–18	123	87	178	171	132	102
1916–17	119	89	178	174	130	104
1915–16	118	90	177	175	129	105
1914–15	121	88	179	175	132	104
1913–14	118	89	174	151	135	104

The graphic chart (10) ranks Alabama as the thirty-eighth State on basis of length of school term.

It will require greatly increased funds to give Alabama school terms long enough to meet the urgent present needs. Meanwhile, in this State, as elsewhere, the ultimate solution of school terms and school attendance will lie in well-taught, all-year schools; i. e., community schools with permanent teachers living on the school premises 12 months in the year, keeping school open at least 180 days annually,

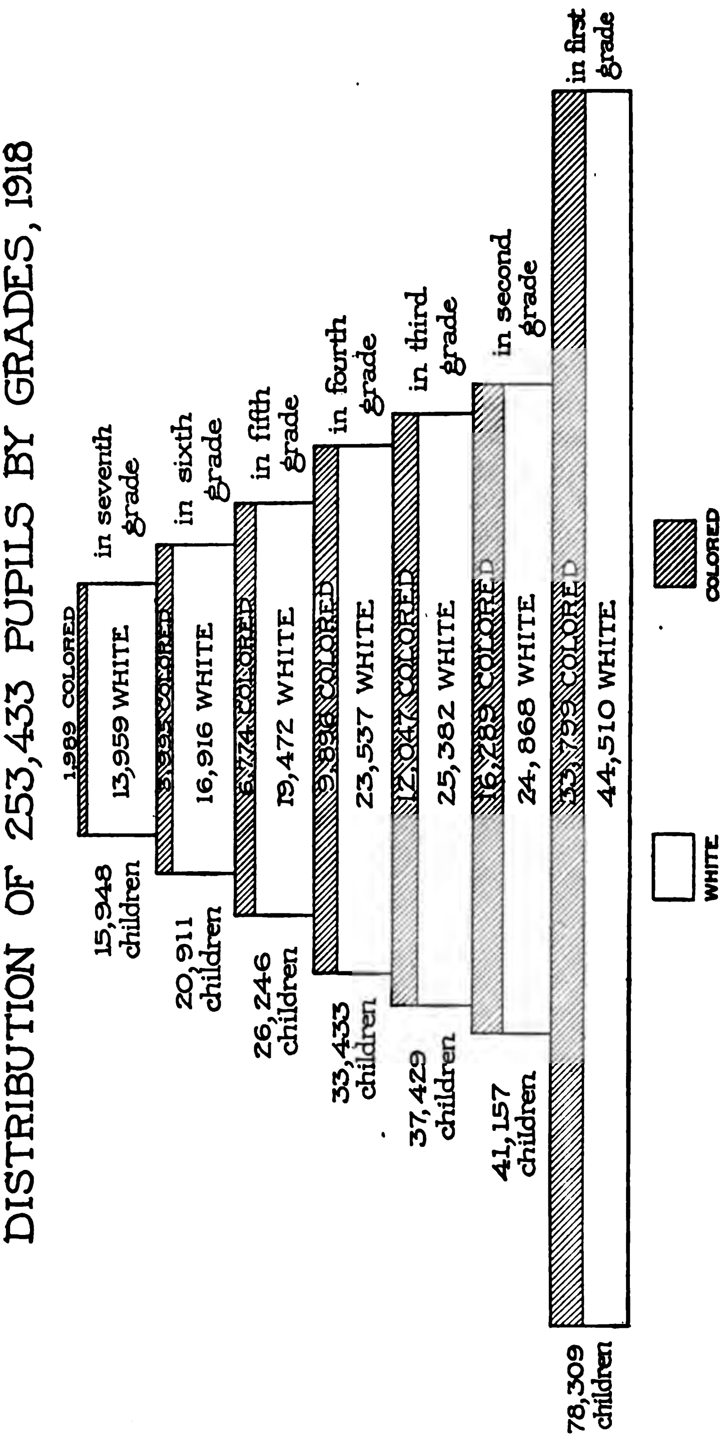
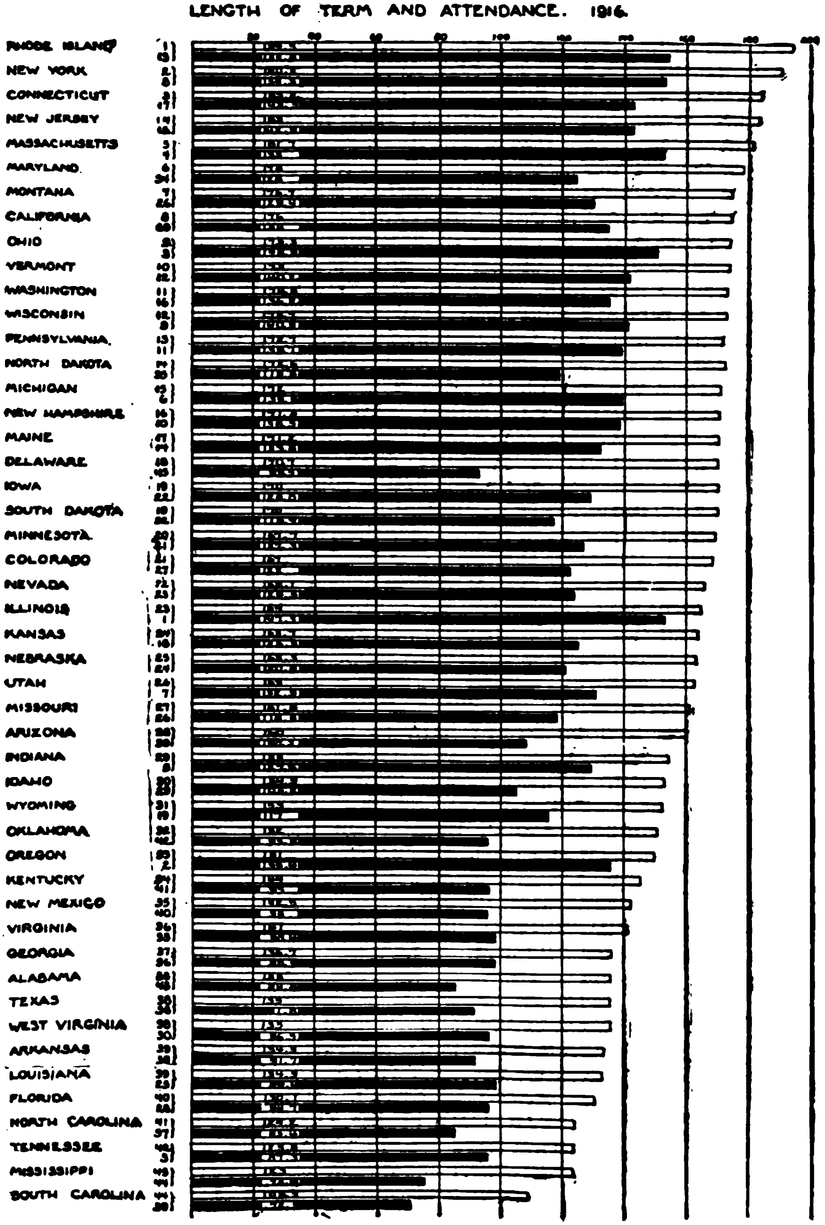

DISTRIBUTION OF 253,433 PUPILS BY GRADES, 1918
15,948 children
1,989 COLORED
13,959 WHITE
in seventh grade
20,911 children
3,995 COLORED
16,916 WHITE
in sixth grade
26,246 children
6,774 COLORED
19,472 WHITE
in fifth grade
33,433 children
9,896 COLORED
23,537 WHITE
in fourth grade
37,429 children
12,047 COLORED
25,382 WHITE
in third grade
41,157 children
16,289 COLORED
24,868 WHITE
in second grade
78,309 children
33,799 COLORED
44,510 WHITE
in first grade
WHITE
COLORED

FIG. 11.

and occupying themselves with other kinds of community education the remainder of the year.

Just when school should be closed for vacation is another important matter. Educators are beginning to realize that vacation time should, so far as possible, be regulated by the work needs of the community. It is quite certain that these conditions vary greatly in Alabama, from the horticultural belt near the Gulf through the cotton-producing Black Belt to the Tennessee Valley, with its varied crop production. The school program should be planned with regard to these needs, not, however, by shortening the school term, but by regulating the attendance of certain grades of pupils by the work needs of the community. Thus, during fruit-picking time or cotton planting or picking time, school work of the upper grades may be discontinued entirely for a certain specified time, and the daily program readjusted to give to the lower grades the time formerly devoted to the advanced grades. This should be a matter of dismissing grades rather than children of certain ages; otherwise it would upset the entire program and would result in the same chaotic condition that now prevails in many of the schools. It is true that so long as the schools are troubled with the large number of over-age pupils that they now are, this plan will be difficult to enforce. The purpose would be to make the program more flexible, but not to close the school or let the children come and go at everyone's beck and call. A program of this kind could be planned by the county superintendents working in conjunction with the State department, and if thoroughly well done would help to overcome difficulties and even injustices done certain sections of the State.

Conditions summarized.—Alabama has invested large sums of money in permanent school plants, which, while in no wise satisfactory or filling all the demands of modern schools, are all that the State has seen its way clear to provide. This investment is not utilized to best advantage; nor does it receive the care and upkeep that it should have. The chief loss lies in indifferent organization and administration, and in a teaching process that does not give the children the type of instruction needed in this great agricultural State. This is proved by the comparatively small enrollment of school population and very low daily attendance. In enrollment of school population, and in daily attendance as well, the State ranks forty-third in the Nation as a whole. This is a poor showing. If the daily attendance were reckoned on school population instead of on enrollment, only 35 per cent of the school population would be in school daily. The school year is only 132 days long, and the average number of days attended by each pupil enrolled is 85—only three States making a worse showing. The average number of days attended by each child of school age is 45. The schools ought to be reorganized on the all-year plan. As a beginning the school year



The light line indicates the total number of days the schools were in operation. The heavy line indicates the average attendance.

FIG. 12.

should be lengthened to 9 months of 20 school days each. An average pupil's school life in Alabama is surprisingly short because of late enrollment and irregular attendance. Very few rural children, unfortunately, get the advantages of secondary and higher schools despite the fact that the State supports 9 district agricultural schools and county high schools in a majority of the counties. Nearly all the culture and all the technical and practical education of Alabama agricultural folk must be acquired in the small schools during the short period now allotted to school life. Every thoughtful person will agree that the level of culture necessary to practical leadership can not be elevated much until radical changes are made in the organization of the small schools, chiefly the outlying rural schools.

Recommendations for improving school attendance and effectiveness of class organization.—On the basis of the foregoing discussion the survey committee recommends:

1. That steps be taken to change the "School Population Age" to include all children between 6 and 18 years, inclusive, but no person older than 16 years should be excluded from school.

2. That the school entrance age be changed from 7 years to 6 years.

3. That constitutional provision be made for apportioning the State school funds on some other basis than the present school population (see Chapter XXIV).

4. That provision be made for a chief attendance officer, as member of the State department of education.

5. That the compulsory attendance law be changed as follows:
   - (*a*) Remove the 80-day and 60-day attendance minimum and require all normal children to attend school throughout the regularly provided school term.
   - (*b*) Issue work permits only to pupils who have completed the fourth grade, and can furnish satisfactory evidence thereof, instead of as now being based on 60 days' attendance during the previous year.
   - (*c*) Safeguard the law by limiting its exemptions as prescribed above in this chapter.

6. That a system of records be perfected by the State department of education to be used in transferring pupils from community to community, to make evasion of school attendance impossible

7. That the school year be lengthened to 9 months of 20 school days each.

8. That all the schools gradually be reorganized as "all-year schools," in charge of professional teachers.

Chapter VII.

THE RURAL SCHOOLS OF ALABAMA.

The need of unifying and equalizing educational opportunities.—For practical school purposes Alabama may be considered a rural State. Agriculture is now and will continue to be the occupation of the majority of the people, though mining, commerce, and industry are important and growing occupations. There are few large cities in the State. The people live almost wholly in small communities, mining camps, and on the farms. The rural schools and those outside the larger centralized places are the schools in which the majority of the children of the State receive their education. Moreover, it is with these schools that the State itself, through legal and administrative provisions, is most concerned and for which, with liberal equalizing and standardizing funds, it can and should do most. Experience in all States shows that cities and towns with their more concentrated resources and cosmopolitan populations are better able and more disposed to provide ample school facilities for their children. Yet the prosperity, progress, and growth of the State are dependent upon the intelligence of the people of the farms and small communities in a greater degree, in so far as they outnumber those in the cities. In these days of easy migration it is of little value even to the cities themselves to educate city children and neglect those in the surrounding communities upon which they depend for the enlargement and replacement of their own population. Certainly the State's interest is to provide a system such that all the children within its borders may have an equal chance for an education.

Alabama is in particular need of unifying and equalizing educational opportunity, and of encouraging local initiative and interest in a far greater degree. The resources of the State will never be developed to their fullest capacity or its possibilities fulfilled until there is a more nearly universal appreciation of the value of education among the people and a greater effort is put forth to provide better schools. Already there are signs that agricultural and industrial resources are developed most fully by persons from other States, because of the lack of educated and trained leadership from within. The greatest wealth of any State is in an educated population.

Without trained people Alabama's vast riches in minerals, timber, and fertile soil are but useless materials. It can not be counted among the progressive States until the mass of its people are educated at least to the degree obtained from good elementary and secondary schools.

Administration of the rural schools.—Alabama has made some striking improvements as far as the method of administration for open country and small community schools is concerned. The adoption of the county unit of administration and the provision for county taxation were great strides in the direction of progress. In the counties observed by the committee the county tax is making possible improvements hitherto undreamed of, though of course quite inadequate to the real needs. The committee found the income from the county tax used for better buildings, longer terms, and higher salaries for teachers. Apparently the county boards are making every effort to the end that the meager sums provided for school support shall fill as many needs as possible (see section on finance). There are many indications that the people, in the majority of the counties, are rapidly obtaining a realization of the need for further progress that will justify the removal of the three mill tax limitation.

The personnel of the county boards is remarkably fine. In many cases members of the committee attended meetings or met individual members of the boards. They were found without exception to be capable, interested and forward looking. Meetings were carried on in a business like manner. The boards are apparently made up of the counties' most representative citizens, farmers, business men, professional men, housewives, and the like. No records were kept under the old régime, and therefore comparisons are not possible. But the business like methods adopted under centralization in the purchase of supplies and carrying on of other business must result in a large measure of economy.

While equality of opportunity is not accomplished throughout the State, it is in a measure accomplished within the counties. The county board assures the same term in all schools, and in so far as possible with present limitations (which are discussed later), pays the same salaries and endeavors to secure the same quality of teachers. The system promises far greater progress than has yet been made toward the accomplishment of at least a minimum standard in building and equipment requirements. The system has been in operation but a short time, and the money furnished is still altogether insufficient. Yet one has only to compare conditions under the old régime as still in evidence with the efforts being made by the new one to realize the magnitude of the improvement already accomplished.

The county superintendent.—The county superintendent is the executive officer of the board, and is appointed by the board for a period and at a salary fixed by it. The board is not limited in its selection to the county or State, but is free to engage the best person obtainable and to pay all the financial condition permits. The boards are taking advantage of this in many counties. Salaries paid are as high as $5,000. Of the 67 county superintendents in the State only 5 receive less than $1,500. These salaries, while reasonable, are not liberal as compared with other States. Pennsylvania, for example, pays its county superintendents from $2,000 to $9,000. New Jersey pays all county superintendents $3,000 per year. In Alabama, assistant supervisors, from 1 to 15, are provided in 19 counties, while 33 county superintendents have from one to four clerks. The observers found the supervisory force inadequate in all cases but one.

The educational qualifications of the superintendents are in most cases fairly good. Of the 67 superintendents, 36 have attended college from one to four years; 27 have attended normal school one or more years. Of these, 5 are within the group of 36 college attendants, making a total of 48 who have from one to four years of higher education. Twenty-four have college degrees. Nine of the acting superintendents have neither college nor normal training. Of these, 6 belong to the hold-over group. All but 1 report some previous experience. In 22 of the counties the superintendents selected under the old system were reappointed by the county boards. In the other 45 new superintendents were employed.

The county superintendents in the majority of the counties have a free hand in engaging and placing teachers, in interpreting the course of study within the limitation set by the State, in adjusting the salary scales, in overseeing buildings, and the like, and are not hampered by the board of education in carrying out the duties of an executive officer. In a few cases, the old idea of permitting local trustees to engage and dismiss teachers still exists. In one or two cases observed this plan resulted in the dismissal of several teachers during the year. However, the custom has practically been abandoned and may be left to die a natural death, as the people realize more and more the advantages of the new system.

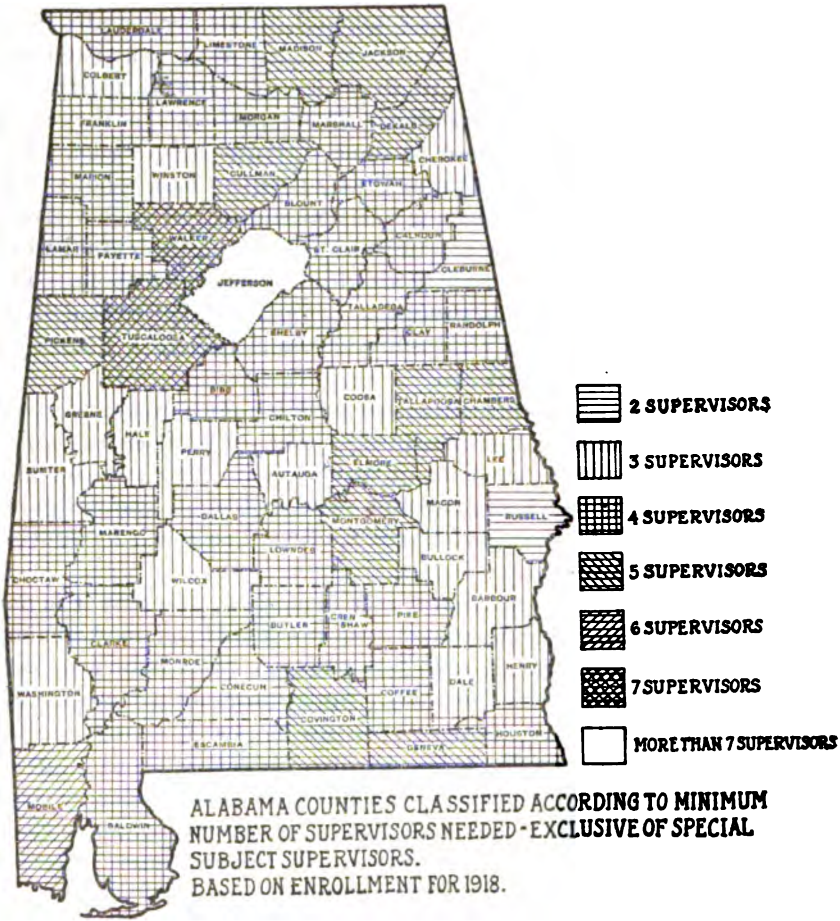
Professional supervision of rural schools.—Expert supervision is perhaps the most important factor in rural school efficiency. Poorly trained and inexperienced teachers congregate in the country, especially in one-teacher schools. Small schools are difficult to organize. They are either so crowded as to render the teacher's time entirely inadequate, or so small as to obviate the possibility of interest. The most difficult problems in organization, discipline, course of study, and method confront the rural teacher. If left to meet them alone chaos usually results. Careful direction, intelligent advice, and constructive criticism are nowhere so necessary as in rural schools.

Supervision includes carrying out a plan for training teachers in service, such that by it a poor corps may be developed into a good one and one originally good may be made better. The supervisor must have personality and magnetism; ability to inspire others with loyalty to his efforts and to develop that *esprit de corps* which characterizes the staff of an efficient system. He must in addition be able to give general and specific instruction in carrying out plans for the conduct of the system through circulars, letters, visits, teachers' meetings, and in all other ways at his command. This necessitates close association with teachers in the classroom. They must be assisted and directed specifically in methods of work, use of material, interpretation of the course of study and other difficult problems as they arise in the classroom. This can not be done through visits alone. The supervisor who depends on this method of supervision wholly will not meet with real success, since a sufficient number of such visits is a physical impossibility. He can no more depend on individual work than can the teacher who has 40 children in one classroom. The teachers must be dealt with in groups according to their needs, ability, training, and experience. Thus supervision is largely a matter of organization and leadership.

The supervisor is also a medium to promote good understanding between the teacher and the community. He works from the point of view of the system as a whole, of which each individual school is a component part. He has a broader view and more knowledge of the work than the teacher, and is not hampered so much by routine and detail.

This conception of supervision is emphasized here because it is one which, in the opinion of the committee, is not realized in Alabama. The supervisor is too often a visitor giving a little help now and then, infrequent and not to the point. Supervisors do not work with a view to definite accomplishment of a few things at a time, undertaking more and more as the staff is trained. It is possible to progress along general lines, while at the same time concentrating on certain ends, accomplishing them one at a time. The system so supervised will be good not in spots only. Some schools will, of course, be better than others, but a good system shows definite accomplishment in all schools, not in a few. The fact that there are untrained and inexperienced teachers in the State does not wholly excuse the supervisor, any more than slowness of some pupils excuses the teachers for lack of progress on the part of the class. These conditions designate situations or persons for concentration of effort, but not impossibility of achievement. This statement should not be interpreted to imply that boards are justified in employing untrained teachers. Only in rare cases can they be made wholly satisfactory. Supervision should begin where normal school training leaves off. It can not accomplish its mission fully if required to do more.

The kind of supervision needed in Alabama can not be supplied wholly by the county superintendent. Until the counties are better organized under the provisions of the new law and are supplied with buildings, equipment, and a trained teaching force, the county superintendent should be relatively free to devote the greater part of his time to administration. Grade supervisors to assist the county superintendent are needed in all counties at about the ratio of 1 supervisor to 40 teachers. Primary supervisors should in most cases be engaged first, since observation shows that the weakness of the school work lies largely in the poor training given in the lower grades. In addition to these, special subject supervisors for cooking and sewing, music, industrial arts, and physical education should be secured as soon as possible.



ALABAMA COUNTIES CLASSIFIED ACCORDING TO MINIMUM NUMBER OF SUPERVISORS NEEDED - EXCLUSIVE OF SPECIAL SUBJECT SUPERVISORS.
BASED ON ENROLLMENT FOR 1918.

MAP. 8.

The committee desires to emphasize the necessity of selecting for this work persons whose qualifications fit them for the demands suggested here. The supervising officer should be fitted by education, training, and experience for his duties. He should have at least four years of college work, including professional training in supervision, administration, and teaching methods in addition to both supervising and teaching experience. He must combine with these, qualities of leadership and personality, ability to organize teachers for work and to train them to carry out his plans. No motives such as those of friendship, place of residence, and the like should enter into the employment of such important officers. The board should be guided by personal and professional qualifications only. Indeed it would be highly desirable and conducive to better ideals and standards if part of the supervisory force were selected from outside the State. Salaries, of course, must be liberal enough to appeal to well-qualified persons, or results need not be expected.

In 35 of the 67 counties the county board of education pays a portion of the salaries of the home demonstration agents. The amount varies, but probably averages about $500 throughout the State. The committee observed the work of these agents in most cases with particular care in the hope of finding some substantial benefit to the schools. Relatively little work educative in its quality was found. The amount paid by the county boards of education seems to the committee quite out of proportion to the results obtained. In one case the county agent is also an assistant county superintendent. In the other counties the agents rarely work through the schools or add in any way to their efficiency. In some cases, notably in Jefferson County, the work done in the schools under direction of the special supervisor is apparently duplicated by county agents as to articles made and projects taught, though these differ slightly in methods. One county board, paying a number of its teachers $40 per month for 7 months, or an annual salary of $280 contributes $535 to the salary of the county agent, who does not even report to the county superintendent of schools, and considers her responsibility to be to authorities other than the county board. However good work of this character may be in its general influence, it is not believed by the committee to be an economical investment on the part of the county boards of education at present, while they are so seriously handicapped for funds. The first interest of the county boards is the schools. When funds sufficient to pay for trained teachers and supervisors are secured they may then afford to help pay county agents provided their work is correlated with the school work and done under the direction of the county board of education.

School sites and grounds.—The modern consolidated school is the center of the community life, education and recreation, and should be appropriately planned with this end in view. A healthful, convenient, beautiful, and well-drained site should be selected for the schoolhouse. There must be plenty of ground for a garden and an experimental plat where agriculture is taught, as well as ample room for play. The buildings should be properly placed on the ground to allow space for ball games, and surrounded by necessary walks, grass, and shrubbery. Shrubbery of wonderful color and variety was abundant in Alabama during the visits made by the survey committee; one had only to transplant it from nearby places to make the school yard attractive and beautiful. Yet in only one group of all those visited was real interest in beautifying the school ground found. This is sometimes due to the fact that proper sites have not been selected, but more often it is due to thoughtlessness and neglect. Generally speaking, rural schools need much more ground than they now have. No school should be placed on a plot smaller than 5 acres, and from 15 to 25 acres are necessary for consolidated schools of any size.

Rural school buildings.—The quality of school instruction is influenced by the teaching background furnished by the immediate school environment and the interest in the community. A community's attitude toward education may be measured, in some degree at least, by the generosity with which it furnishes suitable buildings and equipment and provides for their upkeep and proper maintenance. If the public is indifferent it may expect this indifference to be reflected in the attitude of the teacher and the children. Moreover, a competent, self-respecting teacher, with the right ideals for a schoolroom, will not accept a position in a community which does not show enough interest in the school to furnish a building which satisfies at least the minimum requirements of comfort and convenience and which can not be made an attractive place in which the children and teacher may take pride. Mark Hopkins and a log may have been very well before the days of modern arrangements for convenience and sanitation in schoolhouses. At present the demand for trained teachers exceeds the supply. It is not necessary to suffer the handicaps of unsanitary buildings and poor equipment. Good teachers seek positions in a community which offers favorable conditions for school work and superintendents can not persuade them to accept positions in entirely unattractive and unequipped buildings.

This is, however, but one phase of the matter. Children are entitled to be housed during school hours and school days in buildings which are at least comfortable and sanitary and which have the equipment necessary for good work. It is especially desirable that the rural school should set high standards of hygiene. Rural communities lack boards of health and the sanitary arrangements and regulations prevalent in cities. The record for disease and mortality is out of all proportion to that of the city. Therefore, the school should not only protect the physical well-being of the children but should educate the tastes of the community to an appreciation of better conditions.

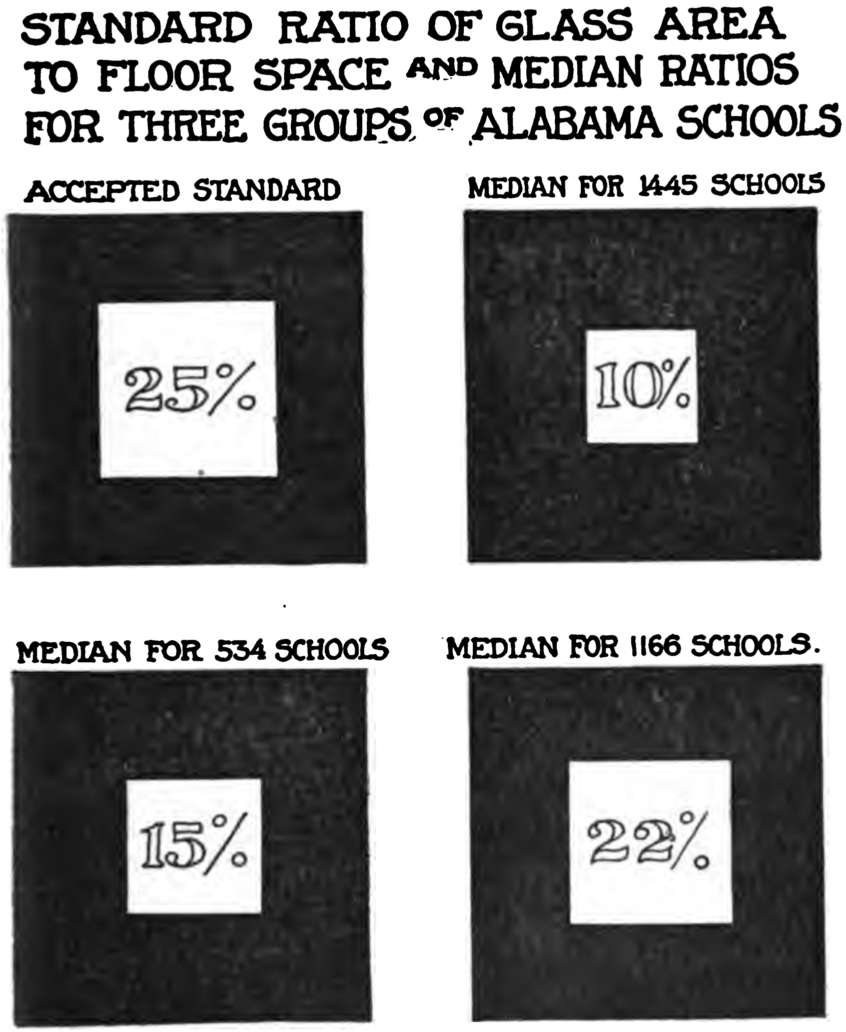


Fig. 13.

School buildings in Alabama do not conform to these ideals. The majority of them are left-overs from the time when money for schoolhouses was obtained by subscription and the buildings built by the neighborhood carpenter or volunteers. Less than 15 per cent of the buildings observed by the committees were painted, although paint would have been well worth the money spent for it from the standpoint of preservation alone, since practically all the buildings are frame. Stoves are almost universally unjacketed and the pipes in bad condition. Only a few of the larger new buildings have ventilating and heating facilities. Members of the committee made their visits during the pleasant days of the early spring, but were impressed with the probability of inadequate heat and ventilation which must prevail during the cold months. Cross lighting, insufficient lighting, improper window placing, or the absence of shades endanger the eyes of the children in 80 per cent of the buildings visited.

Very few, even of the new buildings, have separate auditoriums. It is a common practice among two or three, or even eight and nine room schools, to fit the building with folding doors of some kind that admit of opening two or more rooms into one to serve the purpose of an auditorium. This is very well as a temporary expedient, but is unsatisfactory, especially for large, well-planned, and expensive buildings. In the first place there are few which fit or close satisfactorily. They are not in any sense sound-proof, are often unsightly and occupy space which, because of its relation to the seating, should be used for blackboards. It was noticeable, too, that in many new buildings the rooms provided for special work such as manual training, cooking, and sewing, were not appropriate in size, shape, location, etc., for the purpose for which they were intended. At the same cost, or a trifling additional cost, many school conveniences such as closets and cloakrooms can be provided if the matter is given due consideration before the building is completed. These and similar matters indicate that some one who makes a special study of school architecture should be employed in the State department of education to make suggestions and recommendations in all cases where school buildings are being constructed.

The committee believes it worth while for those intrusted with the construction of schoolhouses to give more serious considerations to the use of basements. Ordinarily, a given amount of room in a basement is not so expensive as it is above ground, and useful space may be secured in this way at relatively small cost. Basements add to the substantial appearance and wear of buildings, and shield them from moisture and unwholesome ground air. If light and well-constructed, they supply additional room for storage of fuel and supplies; a location for toilets, and for play rooms where directed exercises, games, and gymnastics may be held during inclement weather.

The condition of repair found in the buildings visited was exceedingly unsatisfactory. Wooden steps as approaches to buildings are very common and in most cases were found broken or with boards missing. The majority of schools are not painted, inside or out. Blackboards are unfit for use, cracked and shiny and broken in many places. Shades are torn and hanging half off the rollers. Window glass are broken, and a general appearance of neglect, misuse, and lack of care is prevalent in the counties visited. It may be added that not all of these bad conditions are due to lack of money. Often failure to make buildings wholesome and attractive is due more to lack of intelligence and vigorous supervision than to lack of money. Opportunities are not always utilized, because definite guidance and suggestion are wanting. Ideals on the part of supervisors and teachers are as necessary as money.

Deplorable condition of outbuildings.—Outbuildings are an important and necessary part of the school plant. Wood and coal sheds which might well replace the disfiguring piles of fuel in the halls, around the stoves, and under the house would add to the appearance of a large number of schools. A schoolhouse with no basement is unsightly in itself and is much worse in appearance if made the storehouse for unused and broken desks, chairs, and the like and made to serve the purpose of coal and wood house in addition.

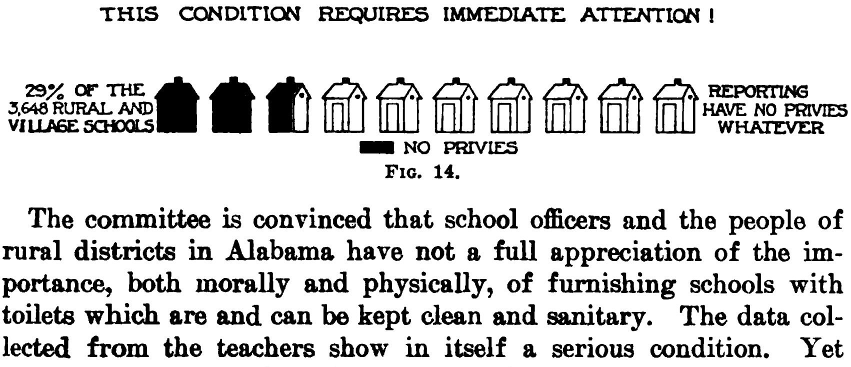


FIG. 14.

The committee is convinced that school officers and the people of rural districts in Alabama have not a full appreciation of the importance, both morally and physically, of furnishing schools with toilets which are and can be kept clean and sanitary. The data collected from the teachers show in itself a serious condition. Yet observation proves that the real situation is even worse. Many of the toilets reported do not comply with the simplest requirements of decency and privacy. Some of those which furnish shelter are in a condition altogether indescribable. Outside toilets are objects of degradation for the rowdies of the community and even for the boys of the school. Obscene markings add to the conditions of filth. Many teachers questioned about the care of the toilets answered that they themselves had not visited them, and they had not been cleaned during the school year.

In one county in which new toilets had been installed, which were therefore in fair condition, no pits had been dug nor any provision made for the use of chemicals. Such conditions become in a few months a menace to the health of the children and the community. Authorities concede that no permanent relief may be looked for from hookworm or typhoid fever until sanitary toilets are used. If these were not supplied in the homes, as so many teachers explained, the matter is of still greater importance. It should be remembered that a good, sanitary, decent toilet system if installed in the schools will in time improve standards in this respect for the homes. When necessary, children should be taught the proper upkeep of toilets. It is a good lesson in health and community civics. Whatever neighborhood conditions may be, the schools, in order to set standards of decency and decorum, must have toilets which are above reproach.

Condition of cleanliness and order in the schools.—It is difficult to think of educating children except in surroundings that exemplify the cardinal virtues of cleanliness and order. One can not conceive of teachers and children sitting in the midst of dirt and disorder and accomplishing anything even in the fundamentals of an elementary education. Yet this was found almost universally in the schoolrooms visited throughout the State. The visitor is repelled by the condition of the room, almost to the exclusion of unbiased judgment of the quality of the instruction. Sweeping is often done by the children during the recess or noon hour. Sometimes the visitor waited outside the building for the process to be accomplished. Sweeping mixtures, oils, dust cloths, etc., are not used to any extent. Sweepings are frequently left under stoves, bookcases, or other convenient pieces of furniture. Corners were full of dust-collecting trash. Bookcases, and sometimes teachers' desks, were piled with débris.

The following from an observer's notes is an example of a very prevalent, if not typical condition:

A bookcase relatively new contained books in disorder, and of two glass doors, one was broken. On top, covered with dust, were the following: A globe, a phonograph record, an old salt box, two books, three old half-used notebooks, a glass with faded flowers and a little water, a plate, a tin pail, a torn shade, a chalk box, a screw driver.

Unfortunately, carelessness of this kind is not confined to untrained and inexperienced teachers. Graduates of normal schools and the higher institutions of the State were among the worst offenders. Members of the committee visiting these institutions found little encouragement for the expectation that teachers graduated from them would establish better conditions or instill higher ideals in this respect. Rural schools can not touch the lives of children nor train a generation of people who appreciate better living for country folk if the schools continue such gross neglect of these matters which lie at the foundation of education and refined living. Moreover, considered only from the physical side, dust is the abiding place of germs; and, when stirred up in clouds during the school day or left to accumulate in unused places where a breath of air may lift it to the breathing line, it becomes dangerous to health.

The classroom.—The modern schoolroom is a workshop, a study, and a living room. It should, therefore, be a pleasant place to work in, should have books and materials for study, and should be as beautiful to live in as a favored home. Not that it should be like the home, but as well adapted to its purposes. The classroom furnishes the immediate background for instruction and conditions its quality as much as the personality of the teacher.

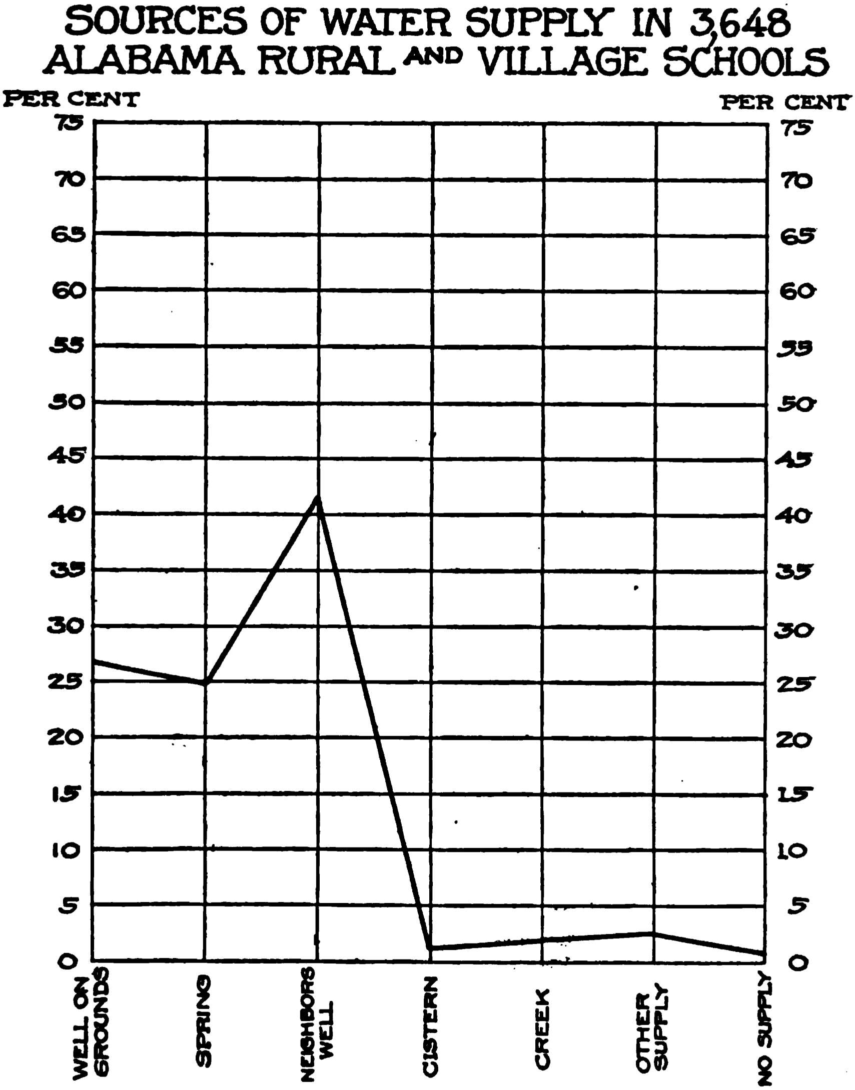


Fig. 15.

Besides a clean room, well aired, lighted, heated, and made comfortable, a minimum amount of equipment is necessary. Good seating arrangements should be furnished; adjustable desks are best; others should be fitted to the size of the children they accommodate. There should be a good globe; such maps as are needed to illustrate the subject matter studied; supplementary and reference books suitable to the grade; good blackboards, properly placed; illustrative and handwork materials; and at least one unabridged dictionary, even if the children are supplied with smaller ones at their desks. The committee found the schools in the State very poorly equipped, judged by the above—a very modest standard. Slate blackboards were found in one school only. Some counties are placing a fair quality of boards such as hyloplate and beaver board in all the schools. This at least should be required if better ones can not be obtained. The shiny, unpainted, worn and broken boards, commonly found, are a severe test to the eyes of the children, and can not be used effectively by the teacher. In many cases the children are housed in large rooms suitable only for halls, with a blackboard on the stage too far away to be seen by the children. This in itself renders the building unfit for use. There is a great need throughout the State for a far more liberal allowance for all equipment, particularly good blackboards.

Globes and maps are very necessary, and are rarely found in the schools. Less than 10 per cent were supplied with both. Observers found teachers teaching latitude and longitude without globe, map, or blackboard. Sometimes none were supplied. Sometimes teachers were so unaccustomed to the use of material that they tried to teach all subjects without illustration. Supply closets, supplementary and reference material are almost entirely wanting. Even schools with State libraries have no supplementary readers or the most necessary reference books. In some schools in which secondary grades are taught there is fair equipment for manual training, cooking, and sewing, and a laboratory for agriculture and chemistry, but no globe, map, dictionary, or encyclopedia for the elementary grades. In one school a seventh grade class in geography was observed studying the comparative size, climate, and surface of the European countries and the United States; no reference material of any sort or globe or map was at hand. There was, in the same school, a so-called "school library" of several hundred books, good bookcases, and office furniture valued at $450. The committee does not wish to imply that libraries and office furniture are not important and valuable. It wishes to suggest the necessity of intelligent selection and the importance of using good judgment in securing supplies and equipment—the simple and most necessary things first.

Daily attendance in the rural schools.—Something of the effectiveness of a school system may be judged by the extent to which it is utilized by those for whom it is intended. A well organized and administered system will enroll a large percentage of the school population and keep them in regular attendance throughout the school term. To this end the school organization, compulsory attendance law, and popular interest contribute.

As one measure of daily attendance the committee noted in a large number of schools in each of the counties visited the actual membership of the school at one time and actual number present on the day of the visit. The result is shown in Tables 13 and 14. It is apparent that in many cases the absentees outnumber those present. The data were collected at a time of year when there was every reason to expect children to be present. Near the close of the term parents and children know that promotion depends on constant attendance. The excuse of helping with farm work offered in many cases is untenable and entirely insufficient to explain absence among smaller as well as larger children and in nonfarming as well as farming communities. Of course, teachers, however good, can not achieve results unless children attend school with reasonable regularity.

Classroom instruction.—The committee observed several hundred teachers at work in all parts of the State. Of these, 70 per cent were practically untrained. While many of those included in the above had had some normal training, it was not enough to influence their teaching in any marked degree. Approximately two-thirds were teaching for the first time in the schools in which they were visited. The majority had some teaching experience, but it was obtained in most cases in unsupervised systems, and was therefore as apt to be useless or even harmful, through the establishment of incorrect habits of procedure, as valuable.

While the final test of the efficiency of any school is found in the quality of the classroom instruction, one must keep in mind, in judging it, the contributory circumstances which condition it. Among rural schools there is practically no supervision worthy of being characterized as professional. The teachers must depend for association, inspiration, and encouragement on the people of the community, and for educational ideals and methods entirely on themselves. Under such conditions much can not be expected except from highly trained, efficient, and experienced teachers of which there are very few. Classrooms are as above described with little equipment, and presenting an appearance of general disorder and carelessness. The teacher in the typical Alabama rural schools may justly be compared so far as surroundings are concerned to the farm house keeper, isolated socially and spiritually and without modern conveniences or ideals of living. Under such circumstances work which should be pleasant and inspiring becomes dull drudgery. There are, of course, some exceptional conditions and exceptional teachers, but the system as a whole must be pictured as described.

The spirit of the teaching force is not above what one would expect to find in such surroundings. Indeed, it is doubtful if teachers with proper ideals and self-respect would tolerate conditions observed. Cleanliness, at least, is always possible. The teaching corps as a whole lacks ideals, energy, aggressiveness, and that inspiring attitude, which, when it exists, compensates in part at least for the lack of professional and scientific qualities in the methods of teaching. One may be capable, interested, and interesting in his work, anxious to avail himself of every possible means to become a better teacher, obviously watching for and profiting by his own failures, even though he lacks professional training, skill, or an education adequate for the needs of the schoolroom. This is the thing, which, for want of a better term, called professional spirit, one misses even more than the lack of training on the part of the teacher. The school day is a monotonous routine of formal memorizing of lessons. There is no interest, inspiration of vision, beyond the completion of the formal day of hearing recitations.

It is practically useless and impossible under such circumstances to discuss the instruction observed in relation to fundamental principles of teaching. Modern ideas and methods are quite disregarded, and do not apparently enter into the consideration of the majority of teachers. The recitation is a lesson-hearing process in which the pupil is expected to memorize the material found in the textbook and repeat it. In many cases the teacher is himself unfamiliar with it, and entirely unprepared either as to subject matter or methods of instruction. He merely attempts to follow the text closely enough to find out that the pupils' effort is either successful or unsuccessful. The result is approved or disapproved without much spirit, and no incentive to do better or help in ways of doing it are given to the pupil. Assignments observed were always by pages or lessons. Discussions or explanations of causes were rare; interruptions by the children at their seats frequent; drill lessons were slow and monotonous; reading expressionless and apparently not understood by the readers or of interest to them. History was simply reading the textbook, often very poorly, or memorizing it. Geography followed the questions in the book, and grammar was the learning of a few definitions in book terms.

Neither story telling, dramatization, music, art, physical education, nor any sort of industrial or vocational education was found except in one county. Oral work as a method of teaching language and literature was not observed. There was no silent reading, though this is more important than oral reading. The value of illustrative material, of seat and industrial work, and of correlation among subjects is entirely overlooked. These are mentioned merely as examples of the omissions, with no attempt to enumerate them all. Discipline, in the sense of preservation of an atmosphere of work rather than one of idleness, is very poor. School tasks are accomplished not so much in the spirit of joyous work or play as in the spirit of drudgery. Idleness among children not reciting is prevalent. The kind of teaching which leads to the cultivation of initiative or encourages the use of judgment is rarely found. Discrimination between items of importance and those of little value is not common even among teachers. There is practically no effort to teach it or to help the children to interpret and learn through the things of immediate interest in their surroundings. Teachers were rarely able to give the pupils help in regard to better preparation for the work of the next lesson. The observer left most classes with a deep-seated impression that the teachers had given little thought to methods of instruction other than those concerned with memorizing the material found in the various textbooks used.

One unfortunate circumstance which leads to lack of professional spirit and interest is the itinerancy of the teachers. This, of course, is not confined to Alabama, but it is accentuated here by low salaries, poor buildings, the general lack of interest, and failure to provide proper equipment. The notes of one observer show that 68 per cent of the teachers in one county observed were teaching for the first time in their respective positions. Naturally, there is little tendency to establish a reputation when one moves about constantly.

The rate with which children are promoted and the rapidity and success with which they progress through the grades show that the plan of organization, the course of study, and the quality of the teaching which prevail need fundamental change and improvement. The promotion rate is much lower than it should be, especially in the lower grades and the rate of retardation is excessive. See Table 15. General school experience and the testimony of the teachers as well as observation convince the committee that irregular attendance is a leading cause. This is due, in part, to the fact that the attendance law is inadequate and poorly enforced, but by no means wholly to this cause. A very general lack of school interest, poor teaching, and a course of study not practical enough in its appeal to the interests of the community and the children are more determining influences. Permanent improvement must come through a general toning up of the system in all directions. Unfortunately, the teachers are not always careful to set an example of regularity and promptness. Rooms are generally in disorder. Programs are not complied with. Recesses are given when convenient instead of at the regular periods. Such irregularities as these were commonly observed by the committee. Such laxness of organization and maintenance does not add to the respect which the people have for the school, nor aid in their sympathetic cooperation toward a more vigorous enforcement of the compulsory-attendance law.

Proposed reorganization of school grades.—The schools of the State are organized on the basis of 7 elementary and 4 secondary grades. The aim of this organization is apparently to cut the usual 12-year course 1 year and accomplish practically the same amount of work. Very few of the newer subjects, such as music, drawing and vocational arts, recreation, and the like were found in the rural courses. The county high schools in many instances offer vocational agriculture, home economics, and manual training. Industrial and commercial subjects are not given. The secondary work is of the old formal type, e. g., 4 years of mathematics was found very generally. Often the one-teacher schools include in their courses 8, 9, and 10 grades.

Naturally the work is badly done, not only in the upper grades, but throughout. Forty-minute periods for the high-school classes mean all too many 5, 10, and 15 minute periods in the elementary classes. The division of grades and work among teachers is entirely unequal, and in favor of the high-school pupils, who are always fewer in number, but whose demands on the teacher's time for both preparation and recitation are correspondingly greater. As an example of this tendency, a case may be cited, of a one-teacher school, including 8 grades, in which the visitors heard a 30-minute recitation in Latin with one pupil. Few of the teachers of high-school subjects visited were prepared for high-school work. To give one illustration, a principal of a 10-grade school visited, who happened just then to be conducting a class in geometry, was a "graduate" of a 10-grade school and of no higher school. Similar instances are not uncommon.

Under these conditions good school work can not be expected. The pupils in the high-school grades were usually found struggling with topics in arithmetic and formal grammar, which should have been mastered in the seventh grade or below. One class observed, "juniors" in a school offering four years of secondary work, were responding poorly to the teacher's efforts to explain how to differentiate among simple, complex, and compound sentences. The physics classes observed in schools of this kind were all of the textbook variety. No equipment for science was found outside of county high schools, and often very little in these. In fact, this type of organization lends itself to superficial work all along the line.

Other indications of the need of reorganization and a new course of study are found in the age-grade data compiled in Tables 3, 4, and 5. Not all overage children are necessarily retarded, but a large percentage of them are. The unusual number of these children in Alabama is due in part to poor attendance, as has been explained.

However, this does not account for all of it nor for the low rate of promotion. The latter is especially serious in view of the fact that attendance drops off so heavily at the close of the term, and classes therefore consist of selected pupils among the total who should be in the grade. Again the promotion rate is lower in the first than in any other grade, reversing the normal order. There is very little reason for nonpromotion in the lower grades. Its existence to so great an extent in Alabama is due in part to the fact that end-of-the-term absentees and irregular attendants must go back to the beginning and repeat the whole instead of part of the work of the grade. It follows that such children rarely stay in school long enough to complete the whole course. Again, if the system were elastic and adaptable enough to accommodate itself to the individual needs there would be a larger group of accelerates. The proportion is pitifully small. It can not be that there are so few really capable children. It must be due to too much rigidity in the organization and a course whose requirements are not fitted to the interests or ability of the children.

The six, three, and three plan.—The committee recommends that the present 7–4 year plan be abandoned, and the 6–3–3 plan be adopted. The first six years for the elementary grades, the following three for the junior high school, and the final three years for the senior high school. No one or two teacher schools should now attempt more than the 6 elementary school grades; later four teachers might be required for any school having 9 grades. The junior high school may be established in schools which are large enough to employ four or more teachers. They should be so located that children in the country too far to walk may be transported in wagons or motor trucks. The distance for transportation may be somewhat greater than is feasible when transporting the younger children of the elementary grades. The equipment necessary for efficient junior high-school work is simple and inexpensive. The larger buildings now in the course of construction and the modern ones of recent construction are appropriate and adequate in most cases or can easily be made so.

The senior high schools will require more equipment and teachers who have at least four years of college training, and who have majored in the subjects they expect to teach. Some such teachers are needed also in junior high schools, but graduates of class A normal schools will be eligible as teachers for the greater part of this work. One or two senior high schools will be sufficient in the majority of counties and will probably be as many as one county can afford to equip and maintain on an effective basis. Senior high schools should, by all means, be located as favorably as possible for easy access from all parts of the county and the board of education should make such arrangements as are necessary to transport or house students from remote portions of the county. A suggestive plan for the organization of a county on the 6-3-3 basis is pictured in figure 16.

A new and quite different course of study will be necessary in order that this plan may meet its full possibilities. The first 6 grades will as now be concerned chiefly with the fundamentals. Topics for teaching purposes should be organized in relation to and from the point of view of the experiences and environment of the children from rural Alabama. The course should not ignore, as it now does, the distinctly modern phases of education. Music and literature, the fine and industrial arts should be taught with emphasis on appreciation. Nature study, elementary agriculture, and school gardening, play and recreation, sanitation and hygiene, some form of industrial work or sewing, dramatization and story telling should all have generous provision in the course. It should aim especially to be helpful to teachers in the organization of subject matter and methods of teaching. Among other things, it should impress upon them the idea that memorization of the textbook is not the aim of school education. This familiar textbook tendency is a serious matter in the State. It may account, in some measure at least, for the lack of vital, aggresive interest felt by the public in the schools.

The course should set up ideals and standards and be definitely and specifically planned to meet conditions as they exist in the schools and communities of the State. It must be revised frequently as conditions change and materials are tried and proved in the schoolroom. It should be elastic enough to permit of free adaptation and supplementing under the direction of county supervisors. A good course of study is the result of constantly conducted and directed experimentation on the part of teachers and specialists in subject matter and methods.

The junior high school grades should include some electives, but because children at this age are not yet mature enough to decide for themselves, the list of required subjects should be long and that of electives short. The latter may be increased the second and third year. The required subjects in the junior high school should include at least three years of English, two of mathematics, three years of history, including European beginnings and advanced American history, one year of civics and community civics, one year of geography and elementary science, three years of physical education, one year of hygiene and sanitation, and three years each of music, art, and current events. It may also include some of the following, the remaining ones to be offered as electives: Home economics, industrial arts, agriculture and one or two other sciences, animal husbandry, vocational guidance, commercial subjects, Latin, and two modern languages. The senior high school course should continue the vocational and academic courses begun in the junior high school, with a higher degree of specialization in view. All senior high schools should prepare for college and give some degree of preparation for the chosen vocational field.

IDEAL ORGANIZATION OF PORTION OF A COUNTY

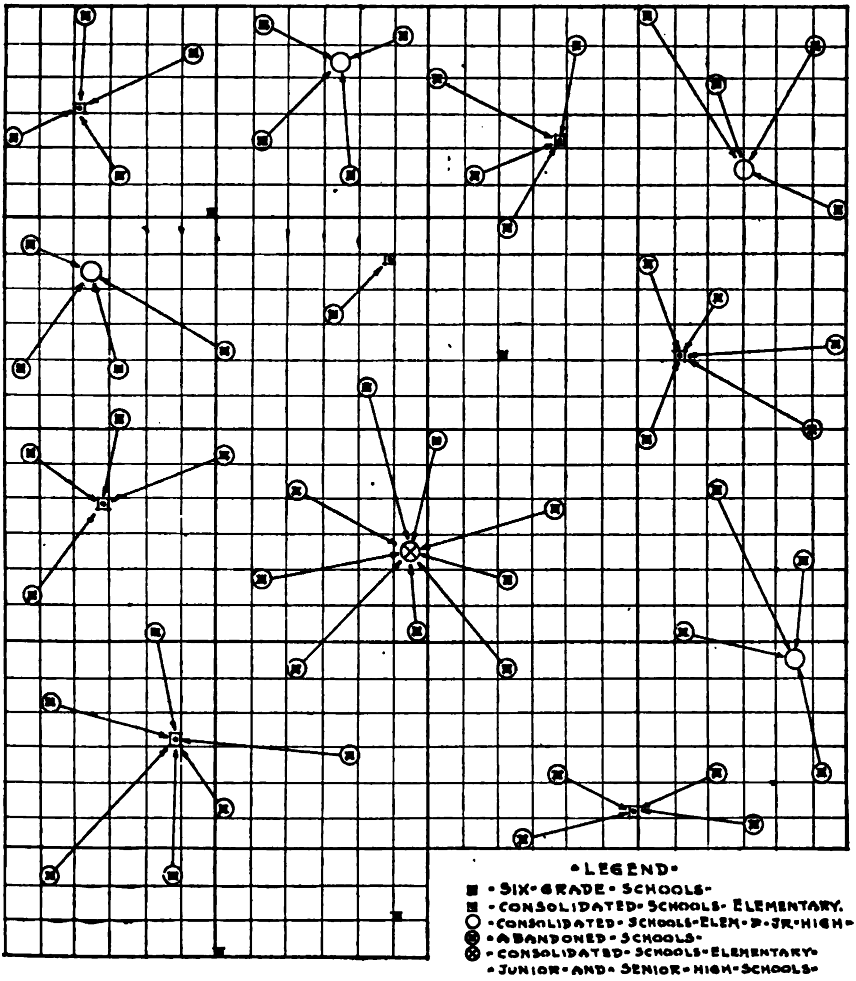

• LEGEND •
■ • SIX • GRADE • SCHOOLS •
▣ • CONSOLIDATED • SCHOOLS • ELEMENTARY.
○ • CONSOLIDATED • SCHOOLS • ELEM • & • JR • HIGH •
◉ • ABANDONED • SCHOOLS •
⊗ • CONSOLIDATED • SCHOOLS • ELEMENTARY • JUNIOR • AND • SENIOR • HIGH • SCHOOLS •

FIG. 16.

Progress in school consolidation.—Progress in school consolidation in Alabama began with the new law for the county unit of administration enacted in 1915. Prior to that time consolidation of schools and transportation of pupils were confined to two counties, Mobile and Sumter. This law gives to county boards of education full authority to fix boundaries of school districts, locate schools, provide for transportation of pupils, and engage teachers. Since its passage at least one consolidation has been effected in each of 48 of the 67 counties. Seven counties, Conecuh, Escambia, Jefferson, Lauderdale, Madison, Montgomery, and Monroe, have made notable progress either in the number of consolidations actually accomplished, or in the adoption by the county board of a program outlining plans for the future. Among the best consolidations may be mentioned Five Points, in Chambers County; Pike Road, Montgomery County; Riverton, Madison County; Alliance and Corner, Jefferson County; Marbury, Autauga County; Wagarville, Washington County.

There are at present 208 consolidated schools in the State, of which 141 are in the open country, 58 in rural villages, and 9 in towns and cities.

The school farm or experimental plot has as yet gained little headway as a part of the school plant in Alabama. The average area of land on which consolidated schools have been erected is four acres. Only 2 per cent have additional acreage for farm purposes. However, a movement is under way which it is hoped will accomplish the purchase of larger plots. A few of the county boards are insisting on the donation of larger tracts as one consideration for the location and erection of consolidated school buildings.

Practically all buildings are wooden structures, built according to the State plans. The funds are obtained by public subscription raised in local communities, supplemented by State aid. A few, 32 per cent to be exact, have separate auditoriums. The number supplied with live stock, farm machinery, and equipment for agriculture, home economics, and shop work is negligible. Only 12 are supplied with teachers' homes, each of which is erected on the school grounds, and occupied by a principal engaged for 12 months. Better plants are difficult to obtain under present conditions since there is no legal way to issue bonds or interest-bearing warrants to obtain money for use in constructing and equipping buildings.

Transportation is provided in the majority of the consolidated schools. It has proved satisfactory in all cases to parents and teachers. Here, as elsewhere, it reduces tardiness and encourages better attendance. At present there are 123 transportation wagons conveying 2,601 children daily. The average distance is four and one-tenth miles and the average daily cost is 14 cents per pupil. There are 123 drivers employed, 88 of whom were selected by means of competitive bids. They receive, on an average, $59 per month. Eighty-three or two-thirds of the transportation vehicles are owned by private individuals, usually the drivers. Forty-one, the remaining third, are owned by the boards of education. Bonds are not required except by about 25 per cent of the employing boards. The amount of the bond required is usually $200.

Unfortunately, exact data concerning education, salaries, tenure of teachers, length of term and attendance are not obtainable because records have been kept only since 1917. Such information as can be obtained indicates that teachers with more experience and with better academic and professional training are employed since consolidation. In Mobile County the length of service of teachers employed under consolidation is four and eight-tenths years, while under the old system it was one and four-tenths years.

The length of term in consolidated schools has increased 25 per cent as compared with the old system. The average salary of principals has increased from $560 to $990, and of teachers from $350 to $540. The increases are due both to lengthening of terms and higher salaries. The increase in enrollment in the new over the old system is 12.5 per cent in counties from which data are obtainable.

The committee believes that the outlook for extending consolidation in Alabama is very good. The laws are favorable, the county boards as a rule are alive to its value, and the people are appreciative of the possibility of obtaining better school facilities for their children through consolidation than in any other way. The State is an ideal one so far as climatic conditions are concerned, the people not distributed over a large territory, but concentrated in communities to a great degree, and the farmers are in need of the social and economic influences exerted by the best consolidated schools throughout the country. The great need is for money enough to equip and maintain satisfactory buildings and to pay capable teachers. Teachers' cottages should be built to a far greater extent. The difficulty of securing comfortable, convenient, and pleasant boarding places is discouraging to good teachers. So far as the general disposition of communities and appreciation of school officers is concerned, the consolidation idea is gaining headway in Alabama. As soon as schools can be better financed the State should make rapid and progressive strides in this particular.

Recommendations for improvement of rural school conditions.—In addition to the recommendations offered elsewhere in this report concerning special matters and particular counties the following are of general application:

(1) Consolidation should be encouraged through State aid. This should be provided by the State board from the funds at their disposal when division is made as recommended in another chapter of this report. A liberal amount should be set aside for this purpose and a continuing appropriation for teachers' salaries should be made.

(2) The employment of assistants to the county superintendent in the supervision of rural schools should be encouraged from the same fund. A bonus should be offered of probably $500 to each supervisor, with the regulation that this amount should not exceed one-third of

the total salary, the remainder to be paid by the county board of education.

(3) Minimum qualifications, educational and professional, should be established through the enactment of the minimum salary law recommended in another chapter. Graduation from class A normal school or equivalent education and training should be required. This standard may be approached gradually and will not be retroactive.

(4) The school sites, size of ground, kind of building, and equipment supplied should be subject to the approval of a State school architect appointed by and acting under the direction of the State board of education. No State funds should be supplied unless the minimum requirements exacted by the State board are fulfilled.

(5) The State board of education should arrange for the reorganization of the school system on the 6–3–3 plan as described in this chapter, and should supervise the formulation of a course of study adapted to this form of organization. This course should be prepared by specialists in subject matter and methods and teachers. It should admit of adaptation and supplementing to fit the needs of different counties and communities.

TABLE 13.—*Attendance on day of visit.*

Counties.	Enrollment.	Present.	Per cent.
Jefferson	1,790	1,111	62.06
Colbert	624	371	59.45
Escambia	609	403	66.33
Bullock	499	395	79.15
Total	3,522	2,280	64.45

TABLE 14.—*Attendance record of approximately 1,500 children in two counties.*

GROUP I.—TOTAL NUMBER ATTENDING, 719. NUMBER ATTENDING LESS THAN 100 DAYS, 378, OR 52.57 PER CENT.

Days.	Children.	Days.	Children.	Days.	Children.
1 to 10	35	66 to 70	17	126 to 130	10
11 to 15	10	71 to 75	28	131 to 135	19
16 to 20	16	76 to 80	27	136 to 140	11
21 to 25	21	81 to 85	27	141 to 145	3
26 to 30	11	86 to 90	33	146 to 150	8
31 to 35	14	91 to 95	28	151 to 155	17
36 to 40	18	96 to 100	26	156 to 160	19
41 to 45	13	101 to 105	26	161 to 165	20
46 to 50	12	106 to 110	26	166 to 170	24
51 to 55	20	111 to 115	18	171 to 175	42
56 to 60	14	116 to 120	51	176 to 180	40
61 to 65	8	121 to 125	7		

Group II.—TOTAL NUMBER ATTENDING, 751. NUMBER ATTENDING LESS THAN 100 DAYS, 358, OR 47.66 PER CENT.

Days.	Children.	Days.	Children.	Days.	Children.
1 to 10	36	66 to 70	18	126 to 130	18
11 to 15	14	71 to 75	24	131 to 135	16
16 to 20	21	76 to 80	19	136 to 140	23
21 to 25	14	81 to 85	19	141 to 145	27
26 to 30	11	86 to 90	18	146 to 150	27
31 to 35	32	91 to 95	24	151 to 155	28
36 to 40	17	96 to 100	24	156 to 160	37
41 to 45	17	101 to 105	30	161 to 165	19
46 to 50	17	106 to 110	29	166 to 170	31
51 to 55	9	111 to 115	22	171 to 175	26
56 to 60	19	116 to 120	19	176 to 180	19
61 to 65	5	121 to 125	22		

Table 15.—*Promotion and failure record of 2,000 children in rural elementary schools.*

Grade.	Number in class at end of term.	Number promoted at end of term.	Per cent promoted at end of term.	Number in class at end of term.	Number promoted at end of term.	Per cent promoted at end of term.	Number in class at end of term.	Number promoted at end of term.	Per cent promoted at end of term.
1	95	54	56⅘	97	70	78	32	21	65
2	66	47	71⅕	72	52	72	37	24	65
3	52	43	82⅔	54	50	93	30	21	70
4	71	59	83	42	38	90	26	19	70
5	66	51	77¼	40	36	90	23	16	74
6	63	47	74⅗	35	31	89	22	14	64
7	54	44	81½	34	27	79	16	9	56

Table 16.—*Summary of age grade data for the State.*

Schools.	Number normal age.	Number under age.	Number over age.	Total.
White schools—Places below 2,000 population	17,422	2,056	18,754	38,232
Per cent	45.56	5.37	49.05	
White schools—Rural	35,105	5,400	52,731	93,236
Per cent	37.65	5.79	56.55	
Bullock County	103	1	106	210
Per cent	49.04	.47	50.47	
Colbert County	554	89	1,229	1,872
Per cent	29.59	4.75	65.65	
Jefferson County—100 white schools	4,253	1,367	7,257	12,877
Per cent	33.02	10.61	56.35	

Table 17.—*Tenure of service among teachers visited by the committee (time in present position).*

Counties.	One year.	Two years.	Three years.	Four years.	Five or more years.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Colbert	68.75	18.75	12.5		
Jefferson	66.66	22.22			11.11
Bullock	56	20	8	4	12

Chapter VIII.

SOME TYPICAL ALABAMA COUNTIES.

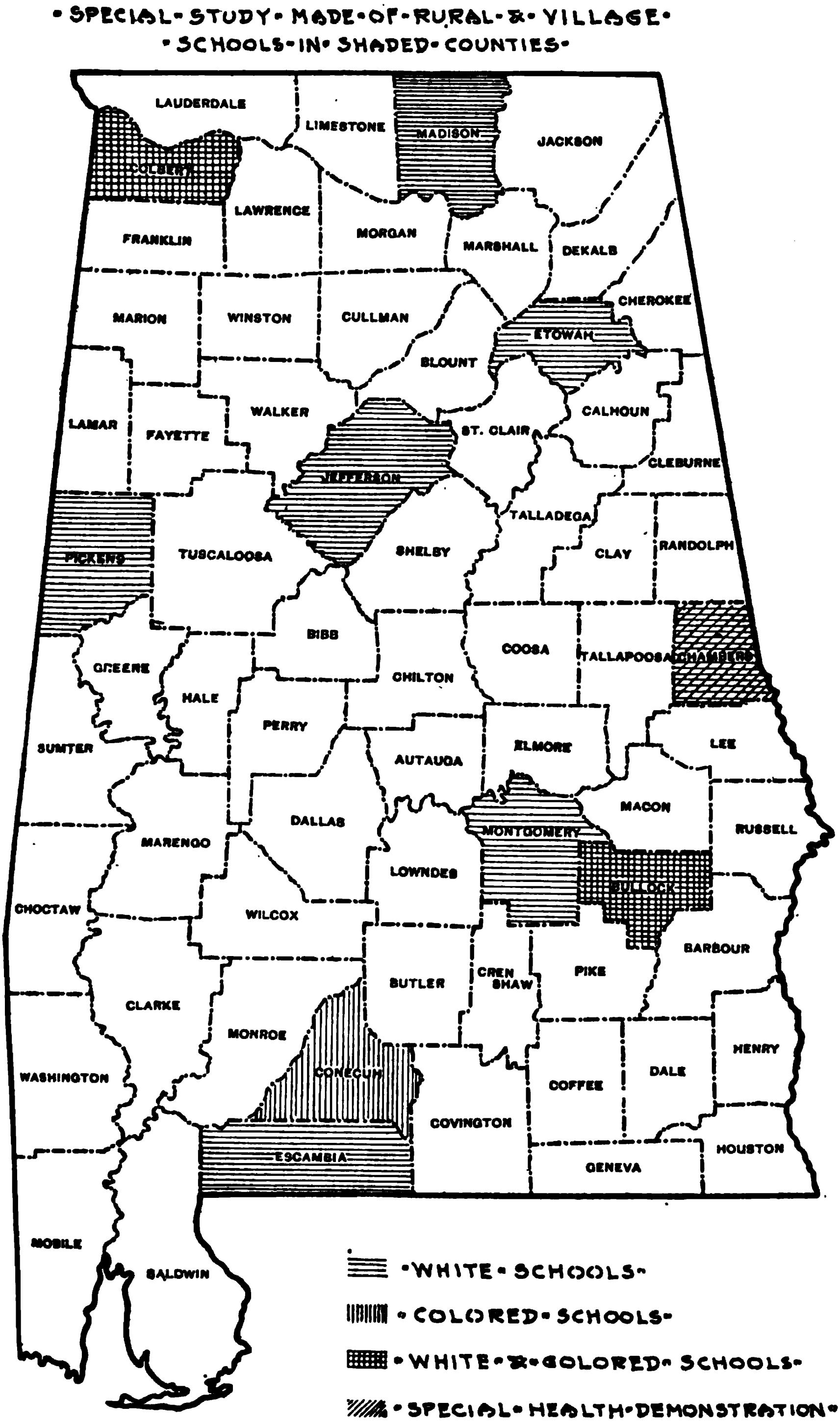
The plan of the State survey contemplated an extensive investigation of conditions in all of the schools, chiefly rural, which are under the jurisdiction of the county boards of education. This was accomplished through: (1) General observation on the part of the committee throughout the State; and (2) special intensive studies of conditions in selected counties. These are shown in the map accompanying the chapter. The result of these studies is given in the following pages. There is in each case a brief survey of school conditions as they are, and certain recommendations based on these, which, if followed, will in the opinion of the committe result in improvement of the schools.

The counties were selected as typical of certain economic and industrial conditions and occupations characteristic of the State as a whole or of a large section of it. Since school conditions correspond to and are influenced by these it is believed that the recommendations given and the suggestions offered for each county and the group as a whole will be suggestive to other counties in the State. Moreover, the committee has endeavored to emphasize in connection with each county the distinctive accomplishment which has been or is being made therein and suggestions for consistently carrying into effect this and other ideas. Throughout the chapter certain ideals are set forth and certain recommendations are made which will be as suggestive to other counties as they are to those for which they are given. School officials may study them and in the light of their own conditions adopt such as will be applicable.

I. MONTGOMERY COUNTY.

Montgomery County has just begun a complete reorganization of its entire rural school system. It is included among those selected for special study because it illustrates what can be done with ample funds when administered in an efficient and business-like manner. It is also worthy of emulation on the part of other counties in the State in which conditions are similarly undeveloped and in which the idea of school consolidation as a county policy has not taken root.

In 1917 Montgomery County was a striking illustration of the deplorable conditions that prevailed over a large section of the State before the effects of the recent progressive legislation began to be


SPECIAL STUDY MADE OF RURAL & VILLAGE SCHOOLS IN SHADED COUNTIES
LAUDERDALE
LIMESTONE
MADISON
JACKSON
COLBERT
LAWRENCE
MORGAN
MARSHALL
DEKALB
FRANKLIN
MARION
WINSTON
CULLMAN
CHEROKEE
ETOWAH
BLOUNT
LAMAR
FAYETTE
WALKER
ST. CLAIR
CALHOUN
CLEBURNE
JEFFERSON
TALLADEGA
PICKENS
TUSCALOOSA
SHELBY
CLAY
RANDOLPH
BIBB
COOSA
TALLAPOOSA
CHAMBERS
GREENE
HALE
CHILTON
PERRY
SUMTER
AUTAUGA
ELMORE
LEE
DALLAS
MACON
RUSSELL
MARENGO
MONTGOMERY
LOWNDES
BULLOCK
CHOCTAW
WILCOX
BARBOUR
BUTLER
CRENSHAW
PIKE
CLARKE
MONROE
HENRY
CONECUH
DALE
WASHINGTON
COFFEE
COVINGTON
ESCAMBIA
HOUSTON
GENEVA
MOBILE
BALDWIN
WHITE SCHOOLS
COLORED SCHOOLS
WHITE & COLORED SCHOOLS
SPECIAL HEALTH DEMONSTRATION

MAP 4.

felt. The county, outside of the city of Montgomery, was obliged to depend wholly on the meager State appropriations for maintenance of its schools. Unfortunately it had long suffered from the effects of a political county superintendency, as appears most strikingly from the following summary[1] of conditions as they prevailed when Dr. W. F. Feagin resigned the office of State superintendent of education to accept the no less important office of county superintendent, swayed, no doubt, by a desire to show what might be done in Alabama under right conditions. And what better illustration can one desire than this to illustrate the effect of the new effective county organization law in contrast with the old political régime.

Valuation of school property.—The total valuation of the 47 white schools outside the city of Montgomery was $34,420, which was $3,080 less than one-half the value of the Montgomery county jail and site and $3,080 less than one-fourth the value of the courthouse, site, furniture, and fixtures.

The total value of the buildings and land was $25,075 or one-third of the value of the jail and site, and one-sixth of the value of the court house, furniture, fixtures, and site. Of the $34,420 invested in school property in the county, only $15,665 or less than one-half belonged to the State and county. In other words, the value of all school property of those schools with titles vested in the State was $5,335, or less than the cost of three of the best motor trucks used in constructing the county roads. The total value of all supplies and equipment, including musical instruments and libraries, was only $5,875, or $1,125 less than the cost of one motor truck used in building the roads of the county.

All school equipment in the county outside of the city of Montgomery was equal in value to less than one-seventh of that of the machines owned by the county and used in making the county's good roads. " Seven to one " was the ratio of the county's investment in equipment for *making roads*, as compared with its investment in equipment for *making men and women.*

General equipment of the schools.—The school equipment was of the meagerest sort. Thus, there was no equipment for teaching industrial work in any of the schools of the county aside from three oil stoves and two old work benches with not more than enough tools for one workman. Playground equipment was practically unknown. There was only one school in the county with any playground apparatus, and this consisted of an old swing and a giant stride. Four schools had tennis courts and one of them had a basket-ball court and baseball diamond. This marks the total of the equipment and conveniences placed at the disposal of the children.

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[1] **See The Physical and Health Conditions of the Montgomery County Rural Schools for White Children, a report to the county board of education, 1917.**

Desks and teaching equipment.—There were 2,592 white children of school age in the county at the time the study was made. Of this number 1,928 were enrolled in the schools. It might, under strict enforcement of the compulsory education law, be possible to increase the number in attendance to 2,200. Of comfortable seatings there were in all 1,145 or just enough for about one-half if all the children were in school.

All kinds of desks were in use, home-made and purchased. In one school there were as many as 13 different kinds of desks. Only 19 out of the 47 schools were supplied with teachers' desks. In many schools not one-half of the entire number of desks were suited to the children seated in them. As may be seen in the accompanying photograph, little children were often seated at desks which were far too high for them, while others were obliged to use desks altogether too small. The teaching equipment was no better. Only seven schools, all told, were equipped with globes; only five had reading charts, either commercial or home-made; and although music has long been considered a part of the daily work of every school in the State, not a single school in the entire county was supplied with any kind of music chart or other means of instructing in the fundamental principles of this art.

Sanitary conditions.—The general sanitary conditions were almost beyond description. Only 2 of the 47 schools reached the standard requirements of 20 per cent of light (measured in area of window space); and 15 at 10 per cent or less. The light and exposure were generally placed without regard to health or comfort. Many of the schools had light from three directions, the front and two sides. Two buildings were properly ventilated, the others received their ventilation by means of doors and windows and through cracks and openings in the floor and walls of the loosely constructed buildings.

The water supply for the schools came principally from the open well of a nearby farm or from an untested spring in the vicinity of the school. All cistern water came from the top of the decaying school buildings and stood in open cisterns, often without being filtered. Eleven schools had water supply on the grounds, 10 were supplied with water brought in buckets from a distance. Many of the home wells from which water was secured are located near horse lots convenient for the watering of the stock, and insanitary in the extreme. The water surface of these wells range in depth from six inches in one instance, to 700 feet in another.

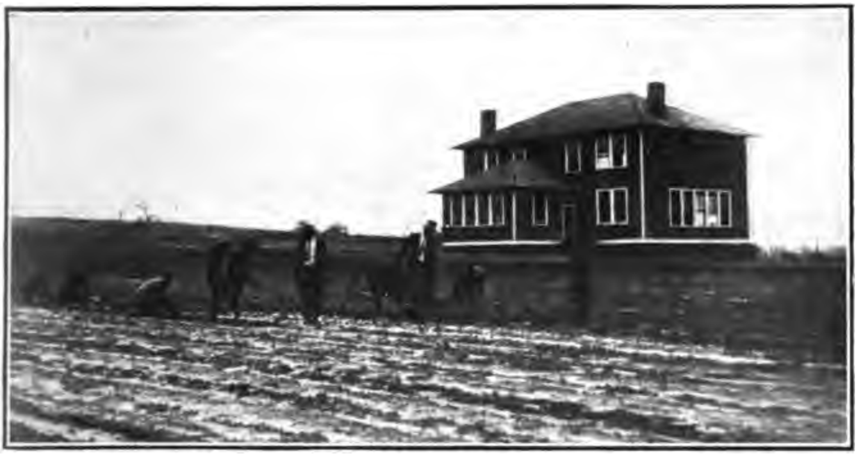
The condition of the school toilets beggars description. Three schools in the county had no toilets for either boys or girls. In these schools the children were obliged to use the woods, a situation often embarrassing, especially during the winter months after the trees and bushes had dropped their leaves. Twenty-eight of the 47 schools had no kind of toilet or outhouse for the boys and, as in the case of the three instances mentioned above, the boys were obliged to find cover in the woods.

Effect of these conditions on the development of rural life in the country.—Such educational conditions as these just described are certain to react on the everyday social life of the people. It is impossible to separate the economic life of an agricultural population from its school life, which is expected to furnish the educated leadership of the community. Montgomery County boasts some of the best roads in the State, but the stimulus which resulted in their construction did not emanate from the country districts. It came from the city of Montgomery. Neither this nor any other rural county in the State can expect to organize a really satisfactory agricultural life before their houses educational have been put in order. The rich soil is here waiting for intelligent treatment; this the modern kind of agricultural community schools can provide—and these schools are now beginning to be erected in the county.

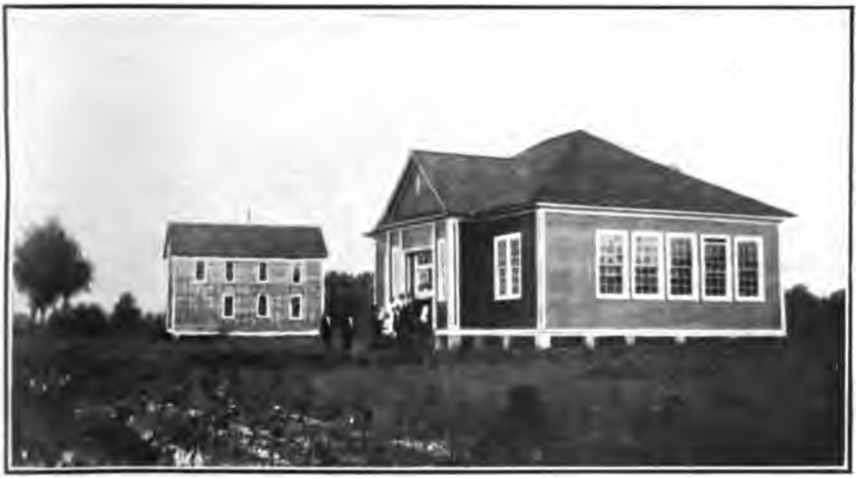
Voting the 3-mill tax the first step.—Montgomery County had first to be freed from the political superintendency with all that goes with it. Then it needed money, much money. When the constitutional amendments went into effect the way was cleared. After a vigorous campaign of education the city and outlying rural districts voted favorably upon the 3-mill tax. The larger per cent of the county tax is paid by the city of Montgomery. This is eminently fair, inasmuch as the city draws largely upon the surrounding rural communities for its sustenance. The whole people of the county thus indorsed the pending reorganization of the schools.

Plan adopted for rebuilding the entire school system.—Map 5 above gives the location of all the schools of the county in 1917, 41 of which are white and 71 colored. The white-school population is comparatively sparse, so that a genuine community organization could be realized only through school consolidation. The colored-school problem, on the other hand, is not one of consolidation, but rather one of enlargement and reconstruction of the present school plants. The colored population is large and well distributed over the county; their schools are included in the reconstruction scheme, but the present plan contemplates rebuilding the white schools first.

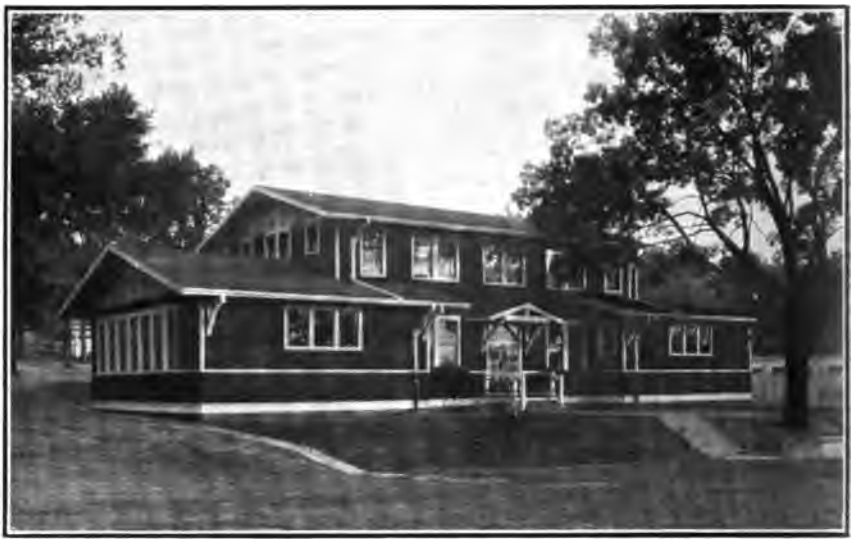
The reorganization under way.—The map shows graphically how the work of reorganization is proceeding. One splendid school has just been organized at Pike Road which provides excellent educational facilities for about one-sixth of the area of the county. A similar school is now being erected at Pine Level. This will receive the white children from a second one-sixth of the county. These two schools will thus provide school facilities for all the white chil-



A. LOWNDES COUNTY TRAINING SCHOOL FOR NEGROES.

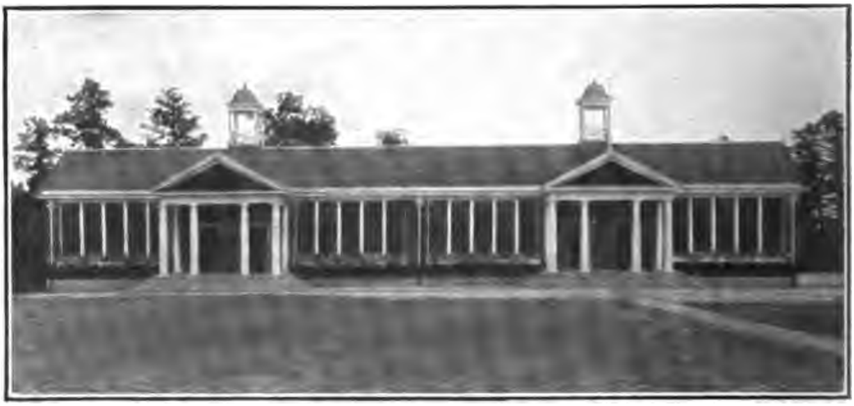


B. ESCAMBIA COUNTY TRAINING SCHOOL FOR NEGROES, AND TEACHERS' HOME.



A. SCHOOL AT MUSCODA.

An attractive building belonging to the Tennessee Coal, Iron & Railroad Co.



B. SCHOOL AT DOCENA.

A good modern structure erected by the Tennessee Coal, Iron & Railroad Co.

A. ATTRACTIVE SCHOOL BUILDING AND GROUNDS AT BAYVIEW; OPERATED BY THE TENNESSEE COAL IRON & RAILROAD CO.

B. SPLENDID NEW CONCRETE SCHOOL BUILDING OPERATED BY THE TENNESSEE COAL, IRON & RAILROAD CO., FAIRFIELD.

A. SCHOOL AT SHAWMUT.

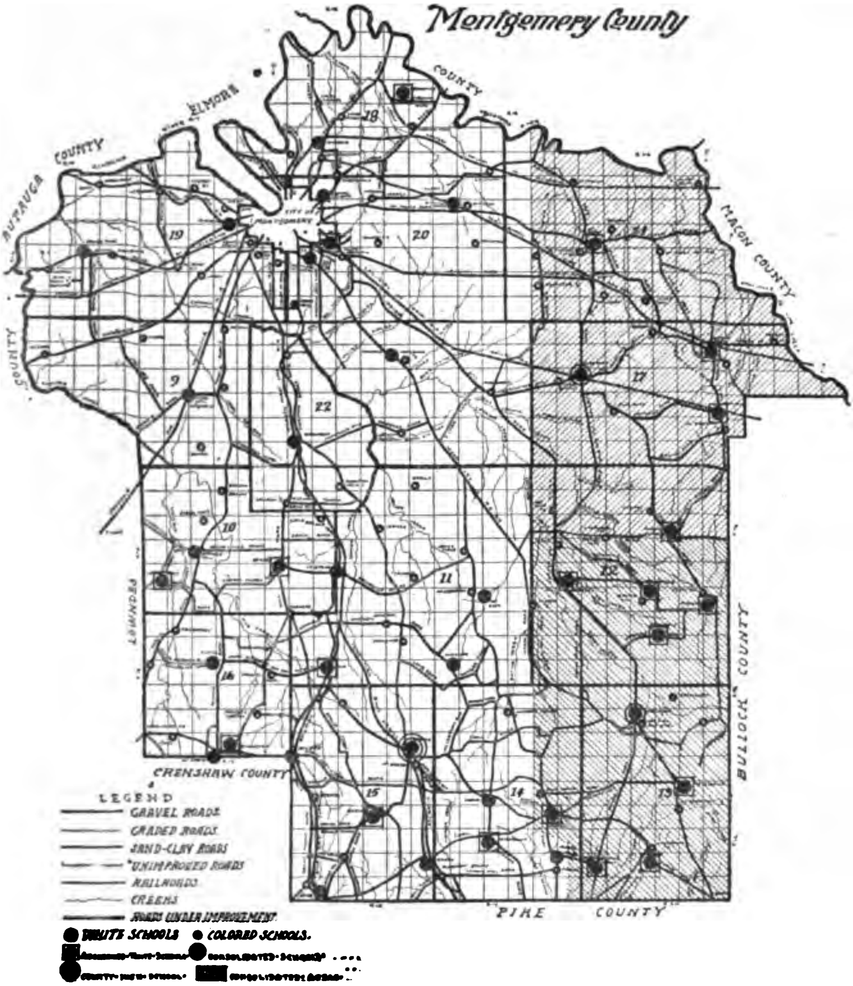
This is one of a large number of typical cotton-mill schools.

B. TEACHERS' HOME AT SHAWMUT.

The teachers pay $14.50 per month for board and lodging.

C. PRINCIPAL'S HOME AT SHAWMUT.

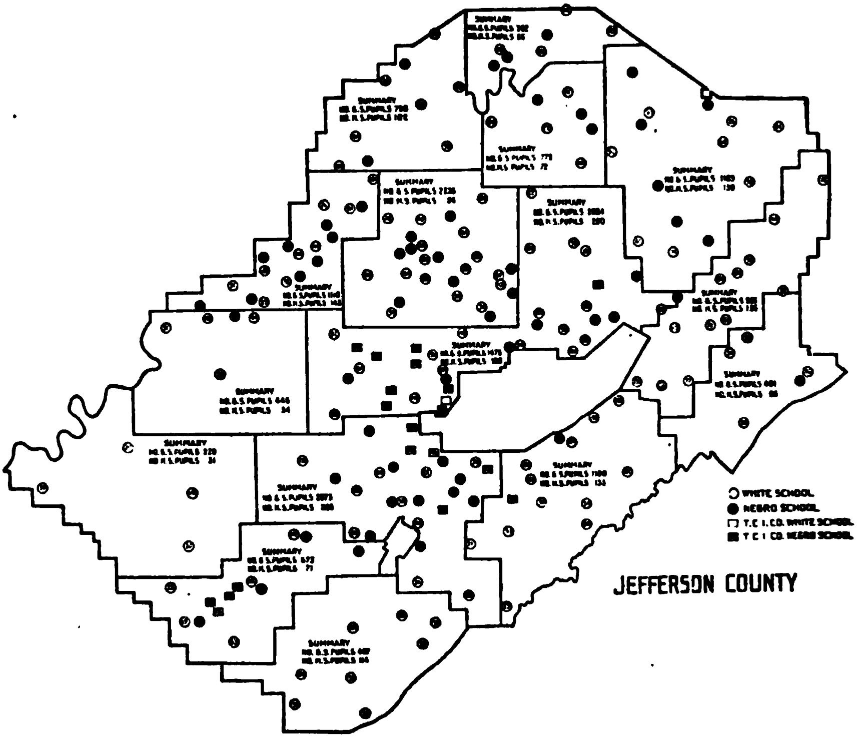
dren of the eastern third of Montgomery County. A county high school is likewise under construction at Ramer in the southern part of the county. This will provide general high-school facilities for all the rural children of the county. When the plan of reorganization is fully realized—and this may take many years—10 or 11



MAP 5.

modern schools will furnish the white population with as complete a system of elementary and secondary schools as can be found anywhere in the country.

The new schools planned for an agricultural population.—The new schools are planned for agricultural people. They are landed schools. Pike Road school is erected on 30 acres of rich farm land. Pine Level has fully 60 acres, and Ramer 53. The schools will soon be supplied with permanent homes for the teachers, so that they may live in the community they serve 12 months in the year, to devote part of their time to ordinary school activities, and the rest to drawing home and school closer together. Agriculture of the practical kind and the important phases of home economics and other industrial activities will have great place in the work of the day in these schools, although assuredly not to the exclusion of the literary or cultural schools. The purpose is to train for Montgomery County a capable agricultural people, ready and eager to live wholesome, happy, and remunerative lives on Montgomery County's rich agricultural lands. This will be the county's greatest financial investment.



MAP 6.

II. JEFFERSON COUNTY.

Jefferson is the richest and most densely populated county in the State. Its resources are industrial, mining, commercial, and agricultural. Rich deposits of coal, iron, and limestone make possible the manufacture of pig iron, steel, and numerous by-products. The county is underlaid with an almost limitless supply of soft coal of good quality. Birmingham, the largest city in the State, is important as a trade and railroad center. Field crops, hogs, and cattle raised in 1918 are valued at over $6,000,000. Surely a county so favored in natural wealth may be expected to be generous in providing for the education of its children.

The total population of the county in 1910 was 226,476, of which 51.6 per cent were native white of native parentage, and 40.5 per cent negro. The foreign-born population was very small. Doubtless it is somewhat larger at present. It is, however, still true that the problem of educating foreigners is relatively slight. The schools are concerned largely with native whites and negroes. The school census for the county in 1918 was 32,418, of which 1,062, or 3.2 per cent, were illiterate. This represents a substantial decrease since 1910.

School attendance.—The enrollment in the county schools for 1918 was about 78 per cent of the census, a very fair record. The percentage of attendance to enrollment, however, was but 58 per cent. This means an average daily absence of about 10,500 children who are enrolled. Members of the committee kept a record, in a large number of schools, of school membership, and number present on the day visits were made. A few of these data are shown in the table below. The visits made by the committee were made in April. There is no real reason why the attendance on the whole should not remain at a normal rate until the close of the term, even though the 80 days of compulsory attendance had expired at the time the schools were visited. Voluntary attendance is a measure of the attenuating or holding power of the school, and of the appreciation on the part of the parents of the need of education and the effectiveness of their school system. Doubtless the extension of the compulsory period to include the full term of school will remedy the matter in part. Corrective measures will, however, be incomplete until the schools are better organized and the work sufficiently practical to appeal to the children's desire for education and the community's ambition for improvement in conditions of living.

Attendance on day of visit, Jefferson County, Ala.

[Per cent present, 62.06.]

Enrollment:	Present.		Present.		Present.
58	47	37	22	40	24
18	4	248	173	59	23
160	100	64	30	40	28
56	42	61	29	29	17
50	36	59	27	32	30
21	16	18	11	32	16
11	7	24	22	42	24
83	32	66	33	23	13
80	60	30	20		
18	2	62	27	1,790	1,111
175	155	20	8		
44	24	30	9		

School buildings.—Jefferson County has not yet achieved definite progress in the matter of furnishing adequate and suitable housing facilities for the school children. No district tax is levied in the county. The entire support comes from State funds and county tax. If provision for building other than the county special tax fund were made and the State and county funds could all be used for maintaining schools, the income would probably be sufficient. However, the income from these two funds is entirely inadequate for both purposes. About 40 of the 135 white school buildings were visited. Of these fully 50 per cent are characterized in the observer's notes as "poor" or "very poor."

The majority of the school buildings in use were built on the old plan of community subscription. They are in every way unfitted for school purposes under modern conditions, and many are in a state bordering on decay. Tottering old buildings, propped on all sides to keep them from falling to pieces or blowing over, buildings sagging in the center due to lack of foundation and long use, are by no means rare. Floors old, worn, uneven, with boards missing and large cracks; door knobs missing with old pieces of wire or a nail through the handle; porches and wooden steps at the entrance in such bad repair as to be unsafe; walls unpainted and smoky; blackboards in poor condition with no frame or chalk rail; and other similar conditions are by no means uncommon in this, the richest county in the State. According to the report of the county superintendent of schools for the year beginning October, 1917, and ending October, 1918, the value of school buildings and sites was $381,102. The school population in July of the same year was 32,468, making the per capita valuation of school property, based on school population, $11.72. Bulletin No. 55, issued by the State department of education in 1916, gives the per capita valuation of buildings for the State as $18.38.

School housekeeping.—Janitor service is furnished for all buildings. The amount spent for this purpose in 1917–18 was $14,157.85. It might be expected that the school housekeeping would comply with requirements of reasonable cleanliness. The observation of the committee failed to verify such an expectation. If this carelessness in housekeeping were confined to the old, unpainted, weather-beaten buildings, it would not be so surprising. A few of the oldest of the buildings, those in which the teachers showed some interest and pride in their surroundings, were relatively clean; while the new buildings were shamefully dirty. The window glass was smeared and dingy. The boards and chalk rails apparently had not seen soap and water since school opened. Floors were littered with dirt and papers. Sweepings were left under stoves and in corners. Unused and broken pieces of desks, curtain poles, old rags, and similar waste material collected dust in corners. The tops of bookcases were catch-alls for dust and unused materials. In one case the principal's office, furnished expensively in new mahogany, with a conference table, chairs, teacher's desk, built-in bookcases, and several hundred books, which might easily be attractive and beautiful if given the most ordinary care, had degenerated into a shabby, dusty, unpleasant, and in every way uninviting place. Instances like the above are by no means isolated or unusual. Indeed, they follow the rule. Only occasionally, and with surprise, did the visitors find reasonably clean buildings.

The majority of the schools are heated by stoves. With one or two exceptions they were found to be rusty, with pipes often old and tumbling down; if unused they were piled in a corner or on the platform, collecting dust. Auditoriums, especially those supplied with stages not used for school classes, are storing places for old trash of every description. These conditions were found in schools teaching hygiene through health crusades, toothbrush drills, and the like. Some teachers seem entirely unaware of the conditions. Others adopt a laissez-faire attitude toward the school and the equipment and are prolific in excuses, such as the janitor is poor, or the school has no proper equipment. The same carelessness was noted in the upkeep of toilets, yet no one assumes responsibility for the bad conditions found. Some teachers explain that the difficulty is due to the homes from which the children come. So far from excusing conditions, this, if true, emphasizes the necessity of stressing these matters with even greater care. Where are the children to get ideals or acquire habits of cleanliness if not in the schools?

The teachers.—Jefferson County has a 9-month school term. The salaries of teachers are shown in Table 18. Owing to the difficulty of getting good boarding places a large number of the teachers live in the near-by cities of Birmingham and Bessemer. Some of the mining companies, notably the Tennessee Coal & Iron Co., furnish cottages for the teachers. The county itself provides only one. The county superintendent and board of education have established a minimum requirement as follows: (1) Normal school graduation or its equivalent in college work, or (2) a high-school diploma with 16 months' successful experience. They have inaugurated also a system of classifying teachers, scaling salaries according to educational qualifications and success in teaching.

TABLE 18.—*Schedule of salaries of teachers.*

Experience.	A Grade.	B Grade.	C Grade.
Inexperienced	$60.00	$55.00	$50.00
1 year's experience	62.50	57.50	52.50
2 years' experience	65.00	60.00	55.00
3 years' experience	67.50	62.50	....
4 years' experience	70.00	65.00	....
5 years' experience	72.50	67.50	....
6 years' experience	75.00	70.00	....
7 years' experience	77.50	....	....
8 years' experience	80.00	....	....

Salaries:	Number receiving.
$50 to $60	127
$60 to $65	45
$65 to $70	87
$70 to $75	20
$75 to $80	40
$80 and over	109
Total	428

The classifying is done by the supervisory force on the basis of the following points in preparation and teaching success: (1) Preparation, 21 points; (2) teaching ability, 27 points; (3) business, 15 points; (4) personality, 19 points; (5) loyalty, 10 points; (6) community interests, 8 points. Total, 100 points. The superintendent makes every effort to retain successful teachers in the system. The salary scale acts as one incentive. In addition, the successful teachers are moved to the more desirable schools near Birmingham and Bessemer as a reward for good work. The scheme is a commendable one. Its complete success depends on the judgment and the ability of the supervising staff to carry out the plan intelligently. The committee believes the idea worth special commendation, particularly as it encourages longer tenure and rewards actual teaching ability.

The staff of teachers in Jefferson County, as might be expected owing to the longer term and better salaries, is of higher grade than in other counties judged on the basis of training and experience. (See Table 19.) The length of service in the county is also longer, marking a distinct advance in the teaching staff. The principals are not, in the opinion of the committee, always fitted by training, experience, ability, and presonality to fill positions of such importance. As compared with the other teachers they are not always the best in the group. The idea of promotion already established as a reward for successful teaching might well be extended to the selection of principals. This would give an opportunity for good teachers to aspire to a principalship regardless of sex, and would encourage continued training and intelligent work. Principals should have free time for supervision; most of them teach several classes and some have no vacant periods at all.

TABLE 19.—*Education beyond the elementary grades of teachers in Jefferson County.*

Years of education beyond elementary grades.	Number of teachers having—	Per cent.
1 year	2	0.66
2 years	15	5.00
3 years	22	7.33
4 years	90	30.00
5 years	63	21.00
6 years	93	31.00
7 years	2	.66
8 years	13	4.33
Total teachers reporting	300	100.00

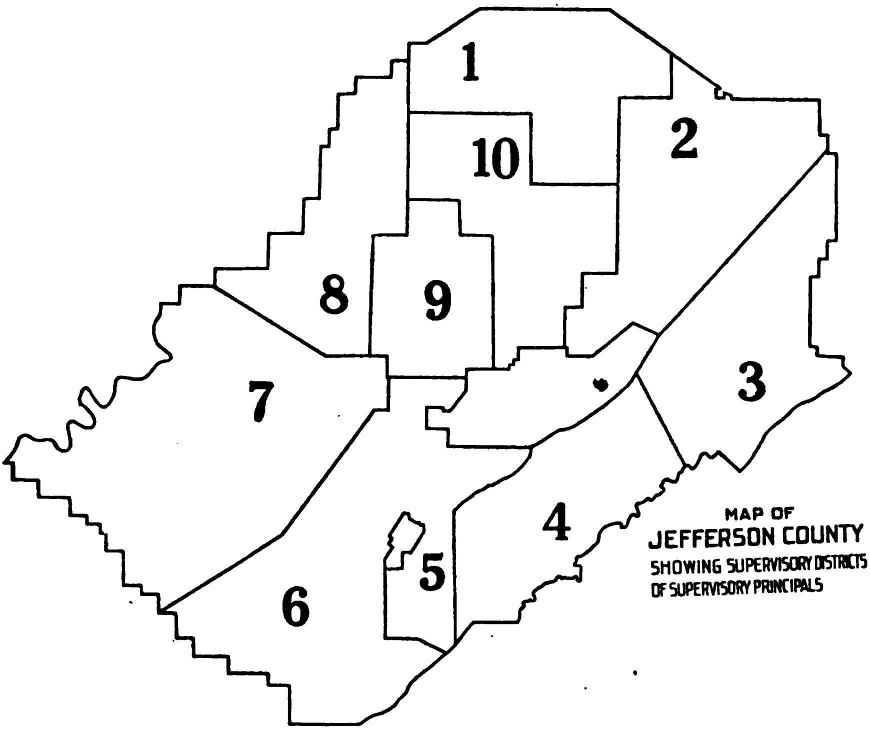
Supervision of the schools.—Jefferson County has inaugurated a complete plan for supervision. The staff is composed of the county superintendent, two assistant superintendents, four special subject supervisors, and 10 supervising principals. (See map 7.) The superintendent and one assistant superintendent and the four special subject supervisors have as their field the county as a whole. The other assistant superintendent is in charge of the group of schools which are financed in part by the Tennessee Coal, Iron & Railroad Co. The present plan has been in operation for about two years. The salary of the county superintendent is $5,000; of the assistant superintendent in the employ of the county, $2,100, and that of each of the special subject supervisors and the supervising principals, $1,320, with an annual traveling allowance of $300.

The plan of supervision is a good one, and many beneficial results were observed. Compared to counties with less supervision, the discipline is better, seating arrangements are improved, repairs receive more and better attention, and the most necessary equipment is more apt to be supplied promptly. Attendance is no doubt improved by the careful attention which the supervisors are able to give to the enforcement of the compulsory attendance law. Supervision also results in better grading, more children complete the seventh grade, and the percentage of promotions is higher because of the frequent visits and assistance rendered to teachers by members of the supervisory staff. The supervising principals reach every school and each teacher about once in two weeks, the county superintendent and assistant supervisors and special subject supervisors less often, but from one to three times in a year at least. In this way the teachers become accustomed to regular inspection at reasonably short intervals. Such supervision gives a motive for system and regularity in the conduct of the school. It is suggestive to the untrained teachers, and helps those with professional training to retain interest and pride in professional ideals and methods.

From the point of view of modern ideas of professional supervision the results are disappointing. The work of the special subject supervisors (discussed more fully under another heading) and of the supervising principals is not of a high quality. In the opinion of the committee the supervising principals are hampered by too much stress on unimportant details, mechanical equipment, supplies, and the like. There is a noticeable lack of professional attitude, unity of purpose, and definite aims on the part of teachers, a condition quite inexcusable in a county with a large number of supervisors. The influence of strong, intelligent leadership, ability to organize and to instill loyalty and enthusiasm among the teaching staff is not apparent. This is not due to absence of conscientious effort on the part of the supervisors. On the whole, they are an intelligent, hard-working, and earnest body. It is due, in the opinion of the committee, to lack of professional training for supervisory work; of a real conception of the purposes of supervision; of ideals for a good school system and familiarity with good modern schools. Successful teaching experience does not necessarily constitute sufficient qualification for supervision. Ideals, breadth of view, ability to lead and organize are of paramount importance. The committee believes it is a mistake to select all the supervising staff from within the county. Some of them should come from outside the county or even outside the State. Too much inbreeding of educational ideas is not conducive to success. The salaries are too low to be commensurate with the duties assigned or the results which should be expected from a well-ordered plan of supervision.

Special and vocational subjects.—Jefferson County is the only one visited by the committee in which manual training, home economics, music, and art are included in the regular course of study and are in charge of special supervisors. The supervisor of manual training teaches in the county high school a large part of his time. The other three subjects are in the hands of persons who devote all their time to supervision. In the case of home economics and art, the teachers are organized into groups and paid by the county board for attendance at Saturday teachers' meetings, where special instruction is given by the supervisor. The music supervisor attempts to accomplish her work wholly through visits to schools, outlines to teachers, and work at the annual institute held before school begins. The special supervision for the subjects named has been in vogue in the county for a number of years, and in at least two cases the present supervisors have been at work in the county more than five years.

There is every reason to expect the work in these subjects to show significant results. Such expectations were, however, almost entirely unfulfilled, so far as the committee's observation goes. Poor results are due in part to the following conditions: (1) There is little evidence of careful organization of groups of teachers, or ability on the part of the supervisor to accomplish results through the teachers themselves rather than by working with the children. Except in occasional cases, and for special and definite purposes, the rural supervisor can not obtain results if he depends entirely on his ability to reach the children directly. This is in most cases a physical impossibility. The results of supervision are successful only in so far as the teachers are led to adopt an enthusiastic attitude toward teaching the special subject and are trained and definitely directed in



MAP 7.

methods of carrying out the plans of the supervisor. In paying teachers for attendance at group meetings the board is showing the disposition to furnish ample opportunity for accomplishment, but the supervisors have apparently failed to fulfill the possibilities. (2) There is very little correlation between the academic and vocational subjects, and practically no relation between the vocational subjects and the real and practical employment of the knowledge gained through their study. To illustrate, the home economics teaching should result first in clean housekeeping. Yet the school buildings notable for lack of cleanliness were often those in which there were special rooms fitted and well equipped for the teaching of this subject. Even the rooms themselves used for cooking demonstrations and teaching were often far from clean or orderly. Schools in which manual training is taught were often those most needing a few nails or screws or other simple repairs. It is difficult to see that teaching these subjects is of great value unless it affects the habits of the children and the upkeep of their immediate surroundings.

The objects made in manual training shops most commonly observed by the committee, even in schools in which some high school subjects were taught, were coat hangers, paper files, and towel racks. One reason for the introduction of vocational subjects into the school curriculum is their practical value to boys and girls in the everyday activities of life. Jefferson is an industrial and agricultural county, and should be an ideal situation for the teaching of vocational subjects. It is apparent from the appearance of the children and the community that there is special need of vocational training. Yet little of the work seen was such as would vitally touch the lives and habits of the children.

The results of art supervision were more apparent than that of the other subjects. In the primary grades paper cutting, colored work in flowers, birds, and the like, were often found associated with the work of the school. Similar correlations were not, however, apparent in the upper grades. Some very good work was seen, and in some cases it was well arranged in the room for display or for the purpose of beautifying the room. It is, however, very disappointing that systematic and continuous supervision of art, extending over a period of years, should not result in higher appreciation of such simple art principles as order and cleanliness and that the educational influence of a few good pictures or even clean walls should be so entirely overlooked.

The committee found no evidence of supervision in the teaching of music. Some regular music lessons were heard, and in a number of instances the children sang during the visit of the observer. The results were almost uniformly poor. The music teaching was not even distinguished by the selection of songs suitable for the different age groups. Training for tone production and musical appreciation was apparently entirely lacking.

School organization.—The schools are organized on the regular plan prevalent in the State of seven elementary and four high school grades. There are two 4-year county high schools, one at Boyles and one at Alliance; and 125 of the county pupils are transported to high schools in Bessemer and Birmingham. Unfortunately, a number of smaller schools are attempting to teach two and three years of secondary school work. This is in most cases of little value, since the teachers have no special preparation for high-school work, the equipment is inadequate, and the teachers in the upper grades are required to give too much time to high-school subjects at the expense of the lower grade rooms. However, the department of education has adopted a scheme for four-year high schools throughout the county. This plan, when in operation, will place a high school within easy access of all the children in the county. The scheme is to be financed chiefly through organizing the districts outlined in the map as special tax districts for high-school purposes. It is hoped that the 3-mill levy in these tax districts will furnish special funds for buildings and maintenance.

Of the 133 white schools, 29 are one-teacher schools. Some of these will be abandoned the coming school year. There are 24 two-teacher and 22 three-teacher schools. The other buildings have from four to nine teachers. Consolidation, therefore, is not a serious or unsolved problem. Complete consolidation will eventually be accomplished in so far as posible by carrying out the plans of the board. The roads are good, and transportation is satisfactory. At present 564 children are being transported to 14 schools at an expenditure of approximately $14,500.

In addition to elementary and high day schools, 52 night schools were in operation during the year 1917–18. Fewer are in operation during the present year, largely owing to the facts that soldiers who made up a large part of the attendance are no longer there and that the influenza epidemic made attendance irregular and even impossible in many cases. However, the night-school idea is a very commendable one, and the board should be congratulated on the establishment of this, the one organized plan for night school under county administration in the State.

Recommendations.—(1) The present old and insanitary buildings should be replaced with modern ones. Schools can not be carried on successfully, nor can capable teachers be obtained, unless reasonable facilities in the way of buildings and equipment are supplied. Because of the necessity of so many buildings, the committee believes it advisable to plan buildings of a relatively inexpensive character, yet at the same time, modern and attractive. It would also seem good policy to build only for supplying present demands and on the unit plan. In a few cases, the buildings observed were larger than immediate needs seemed to justify.

(2) The supervising staff should be made up of persons of ability with at least 4 years of higher education and special training in modern ideas and methods of supervision and successful supervising experience. They should be selected without regard to county or State boundaries. If more money can not be appropriated for this purpose the committee believes better results would be obtained with half as many supervisors at twice the present salary. As soon as more money is available additional supervisors can be added.

Probably a salary of at least $2,500 or $3,000 per annnum will be necesssary to secure qualified persons. At least one should be a specialist in primary work.

(3) Teachers, and especially principals, should be better paid, and higher qualifications should be demanded. Any county in the immediate vicinity of a large city must pay good salaries or the city will take annually the best members of its teaching force. It is particularly desirable that principals capable of administration and supervision be obtained. This will necessitate higher salaries and demand higher qualifications. It will also necessitate at least half a school day free for administration and supervision. Good principals are particularly necessary in a rural system, where close supervision is otherwise impossible.

(4) A course of study better adapted to conditions in the county should be installed. The committee recommends here, as elsewhere, the 6–3–3 plan. Jefferson County is an ideal situation for the adoption of such a plan with industrial and agricultural courses of study. Junior high schools should provide agricultural courses, and should begin vocational guidance, the study of citizenship, industrial arts, and home economics. The courses should be vocational in the sense of offering industrial, home economics, and agricultural training, and cultural in the sense of preparing for college entrance those students who desire to take professional courses.

Tennessee Coal, Iron & Railroad Co. Schools.—The most interesting educational experiment in the State, observed by the committee, is conducted by the Tennessee Coal, Iron & Railroad Co. in connection with its social welfare department. There are 21 of these known as the T. C. I. Schools in Jefferson County. The company furnishes buildings, employs a superintendent and special teachers, and supplements the salaries of the regular teachers. This work is done in complete cooperation with the county. The superintendent is the assistant county superintendent, but is paid entirely by the company.

Special emphasis is placed on the work in physical education carried on in the schools by the regular teachers supervised by a specialist in the subject. Cooking and sewing are also stressed and are taught in the welfare cottages located near the schoolhouses, with a special director in charge. These cottages are duplicates of those built by the company for its employees and are furnished simply, but in good taste, with such furnishings as the workmen can afford. They serve as demonstration cottages for the community as well as classrooms for the children. Schoolhouses are built by the company and fitted into the scheme of landscape artistry adopted. Sites are carefully selected. The architecture harmonizes with the village scheme, to which the schoolhouse and grounds often add the finishing touch.

Buildings are particularly attractive and conform to the best modern ideas of school architecture, both outside and inside. The grounds are laid out with trees, shrubbery, school gardens, inclosed tennis and basket ball courts, and other equipment for recreation. The majority of the buildings visited have auditoriums, cloakrooms, supply closets, and other school conveniences. There are adjustable desks, supplementary reading material, and good working equipment in all schools.

The school housekeeping and general upkeep are worthy of special notice and may well serve as a model for other schools in and out of the county. Janitors are furnished in all cases, and the work is supervised by the teachers. Floors are clean and well kept. Blackboards and windows are washed with soap and water regularly. The walls are decorated in good colors and the interior of the rooms presents a pleasant appearance.

The salaries furnished by the county for teachers are supplemented sufficiently by the company to enable the superintendent to secure professionally trained and experienced persons. Social work is required by the company and special stress is placed on personality and fitness for this additional service. The classroom work observed is of splendid quality. The teaching staff shows good organization, enthusiasm, loyalty, and a high degree of professional spirit. As an example of this, the May Day program of the colored schools held at Westfield, May 3, may be cited. The program consisted of a pageant, introducing setting up drills, folk dances, and the like. Children marched and drilled with soldier-like perfection. They showed splendid training, all of which was given by the regular teachers—none of whom had had previous experience or training in this kind of work—under the direction of the supervisor of physical education. The interest of the community was shown by an attendance of probably 2,000. The program was carried out without a hitch, and order on the grounds was perfect throughout the day.

This is one example of the organization and supervision which prevails throughout the system. As a whole it is an object lesson in efficiency which may well be studied by other county and city systems in the State. It shows conclusively and on the ground what can be done by the expenditure of reasonable funds, business management, and professional service. Conditions are not different in any essentials from those of the surrounding territory. What can be accomplished here can be accomplished elsewhere in the State with similar management and expenditure.

If a private corporation can get value received from the money spent on these schools in the added efficiency and happiness of its employees, will not the county and State benefit at least in the same proportion from similar methods in school improvement? These schools demonstrate conclusively that the ideals advocated in this report are possible of achievement in Alabama; that education is a good business investment; that schools outside of cities can be as good as those within them; that people appreciate good schools, and good buildings; and that teachers and children under trained leadership are capable of doing good work and are happy in doing it.

III. BULLOCK COUNTY.

Bullock County is selected for intensive study as typical of the so-called black-belt portion of the State. It is located near the eastern boundary, south of the central portion. The surface is rolling and uneven generally, but level in the western or "prairie" section. Here stock raising is carried on quite extensively, the land lending itself to the growth of grasses and some grains. Some stock, chiefly hogs, are raised in the remaining portions, but cotton, corn, and peanuts are by far the most abundant crops.

Population.—The population is practically all native; there are but 15 foreign-born persons between the ages of 10 and 20 according to the 1910 census. The county has a large Negro population. Of a total of 30,196, but 5,500 are white. The rate of illiteracy is very high. Of the total males of voting age in 1910, 38 per cent were illiterate. Of the population between 10 and 20, that is, entirely within the legal school age and including the compulsory attendance age, 7,886 or 23 per cent approximately are illiterate. It is especially unfortunate that not alone adults, but about 2,000 children actually of school age are not being reached by the public schools even in the limited degree necessary to overcome absolute illiteracy.

Resources.—Two branches of the Central of Georgia, and the Birmingham and Southeastern Railways traverse the county. These roads give ample egress for the productions of the county, which are almost exclusively farm crops. That the county has a rich soil and possibilities of great prosperity, is indicated by the fact that the farm crops and beef and pork produced in 1918, are valued at $6,969,000. In addition to the actual production as given above, there are in the county at present 28,000 cattle, 40,000 hogs, 105 registered bulls, 475 registered cows. The amount of bank deposits in the county, July 1, 1918, was $1,083,677.99, while those of the same date in 1914 were but $536,075.50. It is interesting to note in this connection that the total tax valuation of the county for 1918 was $5,200,000, and was exceeded by the annual production to the extent of approximately $1,700,000. This is additional evidence of conditions in the State referred to in another chapter concerning the necessity of raising the tax valuation for assessment purposes, and indicates a very wide divergence between the present assessed valuation and the true valuation of county property.

Farming.—Bullock County is among those in the State in which cotton was cultivated to the exclusion of other crops until 1914. While diversified farming and stock raising are improving conditions materially, old methods of farming are still in vogue among a large part of the population. Very little modern farm machinery is in use. The lack of good farm buildings, machine sheds, silos, and other similar characteristics of successful farm communities is very marked. The schools have so far exerted practically no influence in the introduction of intelligent and scientific farm methods. Land which will produce such prolific crops as have been indicated above with the poor methods of farming now in vogue promises to be exceedingly rich if scientific methods were followed.

School conditions.—Bullock is one of the eight counties in the State which has no county tax for school purposes. With the exception of Union Springs, the only town of over 2,000 inhabitants, the people depend entirely on State funds, dog and poll taxes to educate their children. Like certain other counties referred to in a previous chapter it has not yet assimilated the true idea of the meaning of public education. A number of white schools supplement the term afforded by the county from one to two months, and, in a few cases, supplement the teachers' salaries. About four-fifths of the colored schools are supplemented both in length of term and teachers' salaries by subscriptions from the community.

The State apportioned to the county for 1918 $2.86 per capita of school population, white and colored. The average per capita expenditure for teachers' salaries in white schools varies from $11.36 to $78 per annum, averaging $36.96 for the county as a whole. The term is six months in white schools and three months in colored. Of the total amount received from the sources mentioned above, $28,060 is spent in teachers' salaries; $2,384 for transportation; $2,900 for administrative expenses, including salaries of the county superintendent and county home demonstration agent and other office expenses, a total of approximately $32,000. For a county which can produce crops valued at $6,969,000 a year, this expenditure is very meager, indeed. Even if the county alone, without State aid, paid this amount, it would mean an expenditure of but four-tenths of 1 per cent of its annual income for the education of its children.

Consolidation of schools.—Since the law providing for the county unit of administration went into effect, or for about one and a half years, the county board of education and the county superintendent of schools have promulgated the consolidation idea among the people of the county and have promoted centralization of school facilities, or formed plans for doing so, about as rapidly as roads and other contributing conditions permit. The consolidation so far effected has been brought about by closing a few small schools and transporting the children to larger schools already in existence. The county board has in contemplation a plan to redistrict the county with a view to effecting gradually a reasonably complete plan for the consolidation of elementary schools. At present 101 children are transported at an expense of $2,384.50 to ten schools. The per capita expense of transportation averages $23.60, ranging from $11.17 to $47.33.

High-school facilities.—Bullock has no county high school. The district high school at Union Springs is the only accredited public four-year high school in the county. Several of the larger rural schools, such as Midway, Perote, and Inverness, include the upper grades, the eighth, ninth, and tenth. Secondary school subjects are taught in these schools by the principal assisted to some extent by teachers regularly employed in the elementary grades. Here as elsewhere this practice should be discontinued. It results in an injustice not alone to the pupils of the elementary grades, who are deprived of the necessary amount of attention on the part of their own teachers, but to high-school pupils also. A high school worthy of the name requires specially trained teachers and equipment in the way of science laboratories and reference libraries.

So far as real secondary education is concerned, Bullock County furnishes no facilities for its rural children. In connection with the redistricting plan, referred to in a preceding paragraph, the county board should keep in mind as its ultimate goal a system organized on the 6–3–3 plan, explained fully in another chapter. One-teacher schools should teach only the first six grades. Junior high schools, including the seventh, eighth, and ninth grades, should be located in strategic places throughout the county, drawing on a larger territory than can one and two teacher schools. At least four teachers are necessary for schools with junior high-school courses. Of these, Bullock County needs several. The full time of three or more teachers and proper library and laboratory facilities will be necessary for an efficient senior high school. One or two will probably suffice for the county for some years at least. Pupils who are prepared to enter senior high schools are old enough to travel long distances. Transportation should be furnished by the county.

School buildings.—The school buildings of the county, considered as a whole, are old, in poor condition, insanitary, inappropriate, inconvenient, and in every way unfitted for the purposes they serve. They have been built by the communities in which they are located with funds subscribed by the patrons. In a few cases there are State buildings built by the community with the help of State funds. These are more modern than the others and built with some idea of appropriateness and sanitation. They are frequently unpainted and almost entirely unequipped. A few old two-story buildings, built originally and sometimes still used for lodge purposes, are fitted up for schools.

There are few cloakrooms. Children hang their hats and coats on the walls or throw them over unused desks or their own desks. Blackboards are entirely insufficient in amount and poor in quality. No slate boards were seen; hyloplate, beaver board, and painted boards are the most common. Double desks prevail throughout the county and in most cases they are not fitted in size for the children who use them. Many schools have not proper provision for supplying water, but use the neighbor's well, or a nearby spring, often impure. The water within the rooms is sometimes kept in proper sanitary coolers, but frequently no such provision is made and the open pail and the common dipper still prevails. In the rural schools, playground equipment is entirely unknown. It is very common to find the yard in bad condition, littered with papers and brush, the ground beneath the building used as a storehouse for all manner of useless articles, and the building itself, especially as to walls and floors, decidedly unclean. Such a condition of affairs can not but lead to the utter neglect of a very important part of the education of children, including the cultivation of habits of physical cleanliness in their person and in their surroundings. The situation in regard to toilets is a disgraceful menace to the health and morals of the children. Some schools have no toilets. Many have but one, in such bad repair as scarcely to afford decent shelter; boards missing, doors hanging, and similar serious oversights prevail. Many rural schools make no effort whatever to supply and maintain toilets for the boys, considering it either unnecessary or impossible. The few schools which are supplied with two toilets, do not provide means for caring for and cleaning them. This is apparently no one's responsibility. Conditions are, therefore, exceedingly bad in many cases. No sanitary toilets were seen outside of the school in Union Springs, in which their care is far from satisfactory.

Classroom instruction.—The teaching observed in the various classrooms exemplified the poor work described in a preceding chapter. There is a very marked lack of professional spirit. There is no *esprit de corps* among the teachers of the county, no unity of procedure. Each school, and in many cases each teacher, practically goes his own way, free to have as good or as poor a school as he sees fit, with little regard to conditions in other rooms or other schools of the county. There are a few trained teachers. Most of them, however, lack professional training or a sufficient amount of academic education to make good work possible. So long as the county pays small salaries and maintains a term of but six months, it can not be expected that professionally trained people will aspire to teaching positions in it. At present the majority of women teachers get $60 a month. The principals, all of whom are men, receive from $100 to $125. The teaching is largely repetition of the material found in the book and the teachers can best be characterized as "keeping school" and "hearing lessons."

School attendance.—School attendance in the county is very poor. The following table, made from data collected from schools visited by members of the committee, is one indication of this. All that was said concerning school attendance in the State in a preceding chapter is exemplified at its worst in Bullock County. Lack of school interest, old and poorly equipped school buildings, short terms, and underpaid teachers always conduce to carelessness and irregularity in attendance. Children can not be expected to have more respect for the schools or value education more highly than their elders.

Attendance on day of visit, Bullock County, Ala.

[Per cent present, 79.15.]

Enrollment:	Present.	Enrollment—Continued.	Present.	Enrollment—Continued.	Present.
24	12	38	25	14	9
19	15	32	24	29	18
17	10	40	35	27	25
20	10	27	23	499	395
100	100	38	33		
14	13	8	5		
21	11	31	27		

Recommendations.—(1) The money provided for school purposes must be substantially increased. Both county and district taxation will be necessary to maintain good schools. New buildings should replace those now in use throughout the county except in those cases in which State buildings are now provided. This will require some bonded indebtedness if satisfactorily accomplished.

(2) The term should be lengthened in both white and colored schools. More and better teachers are essential and higher salaries must be paid to secure them.

(3) Professional supervision is essential to good results in school work. A primary supervisor should be engaged immediately. The home demonstration agent should be primarily a county supervisor working under the direction of the county superintendent. She should assist in the supervision of the upper grades and correlate the school studies with the club work. The clubs may then be organized and directed by the teachers under the supervision of the home demonstration agent.

(4) Additional and closer supervision should be supplied through principals who are capable, experienced, and professionally trained. Until complete consolidation is accomplished, certain districts should be formed in the county in which from two to five schools together employ one person who acts as supervising principal for the group. The principal should have plenty of free time for supervising and an expense allowance for transportation among schools.

(5) A director of school health (see plan outlined in another chapter of this report) is particularly essential in this county. Sanitary conditions of the school sites and buildings as well as health conditions among children need immediate attention.

(6) Adequate arrangements must be made for the enforcement of the compulsory attendance law. The large number of illiterates and poor school attendance show this to be necessary.

IV. COLBERT COUNTY.

Two counties, Colbert and Madison, are selected for discussion as typical of that portion of the State known as the Tennessee Valley. The population of Colbert County is chiefly white, with a total of 24,802, of whom 15,352, or 61.9 per cent, are white, and 9,444, or 38.1 per cent, are colored. The percentage of illiteracy among those 10 years of age and over is 20.7 per cent for both races. Ten per cent of this is among the whites, and 37.5 per cent among the negroes. The total number of illiterate persons between the ages of 10 and 20 years, or of school age, is 996.

Physical resources.—Colbert County has relatively a low valuation with great stretches of unimproved and practically waste land. Tuscumbia, the county seat, is an industrial center in which are located nitrate plants now under Government management. Sheffield, a few miles distant, has similar conditions. The remainder of the county is entirely agricultural. The northern part is relatively level, and given over to the cultivation of corn and cotton. The southern part is hilly, and contains much unimproved and waste land.

The total money value of farm crops, cattle and hogs, produced in 1918, was $4,304,000; that of the industrial centers surrounding Tuscumbia and Sheffield is not available. Cotton is by far the most important farm crop, the value of that produced in 1917 was over $2,000,000. Cattle and hog raising is increasing in importance, although the value of thoroughbred stock raising as a paying business is not yet appreciated in the county. The lands, however, are fitted to produce abundant crops, corn, small grains, and grasses. The assessed valuation of property for tax purposes is $9,200,000.

School conditions.—The schools are supported by State funds, county, and poll taxes. A statement of receipts and expenditures for 1918 follows:

RECEIPTS.

County tax	$27,600.00
Poll tax	2,014.50
State	32,712.48
Total	62,326.98

DISBURSEMENTS.

For teachers' salaries	$56,000.00
For libraries[1]	1,880.00
Maps, globes, etc	534.00
Salaries	3,950.00
Office expenses	250.00
Total	62,614.00

Of the $62,000 spent in 1918 for school purposes, the county itself furnished through county taxation and poll taxes, $28,600. This amounts to about seven-tenths of 1 per cent of the income for the same year. The remaining 54 per cent of the total expenditure was received from the State. Colbert is one of those counties which gets from the State for school purposes more than it pays into the State treasury in the form of taxation for all purposes, an amount equal to 54 per cent of the total spent for schools.

From an educational standpoint, the county is almost entirely undeveloped. The buildings are exceedingly poor, and are of the type built years ago by community subscription. Lighting, heating, ventilation, and other sanitary requirements were entirely overlooked when the buildings were erected. There are a few new State buildings with sufficient ground and with proper provision for convenience and sanitation, but these are entirely insufficient in number. At the beginning of the present school year certain minimum requirements were exacted by the county board of education from the local communities. Some idea of the difficulties encountered by the present board and the superintendent may be gained from the fact that of the 42 white school buildings, 35 were required to build new toilets before school opened for the present year, making a total of 70 new toilets placed in the county last fall.

In fact, at the beginning of the present school year, October, 1918, the county board and the county superintendent, who then entered upon the duties of his office, were confronted with a situation similar to that already described in Montgomery County. Buildings were altogether bad, teachers untrained and inefficient, salaries low, the term short and divided into two sessions. The schools were entirely unequipped, neither books, globes, maps, nor blackboards other than painted walls having been supplied. There were no desks except those of the homemade variety in the majority of the schools. Drastic measures were needed immediately. The county board had taken an advanced step, made possible by the recently enacted law, and engaged a superintendent from outside the county, of long experience and professional qualifications. They next enacted certain regulations concerning minimum requirements expected of local communities, teachers, and school officers. Briefly, the most important of these were as follows:

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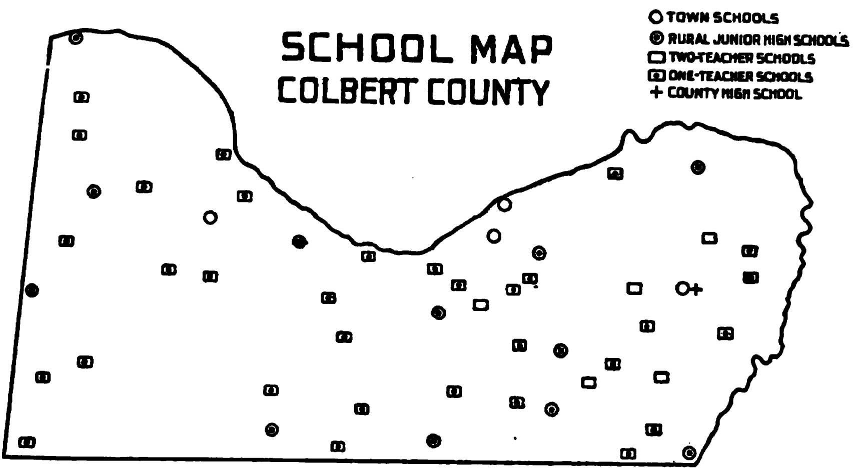
[1] Money spent for libraries came from the State, the county commissioners, and the communities.



MAP 8.

1. Every school must be supplied with a woodshed and sufficient wood, ready cut.

2. Stoves must be bought and stovepipes must be riveted and fastened so that they can not fall.

3. Sufficient and proper light must be provided by rearranging and cutting new windows where necessary.

4. Satisfactory school desks must be provided for all schools.

5. No common drinking cups will be allowed on the school grounds, and some kind of water container with a cover and faucet must be provided.

6. Some arrangement for keeping down dust in the schoolroom must be made.

7. Toilets must be provided for both boys and girls on every school grounds.

8. Sufficient usable blackboards, maps, charts, a globe and reasonable library facilities must be provided.

NOTE.—Any school failing to provide the above within a reasonable time after school opens shall be discontinued until after such is provided.

9. A continuous term of at least 6 months each year will be provided.

10. Classes must be so combined as to reduce the number of recitations per day to not more than 25 for one teacher.

11. All teachers shall dismiss their schools on Thursday afternoon once every six weeks for the purpose of meeting in a county teachers' conference which all teachers shall be required to attend.

These regulations were carried out by the trustees and teachers in all schools observed by the committee. The board placed patent desks in all of the schools not previously equipped with them; 24 feet of blackboard; one good map; a globe, and a small library. This represents a splendid accomplishment for one year, but is, of course, entirely inadequate to the actual needs of the schools. Many of the old school buildings, repaired and equipped with desks, unilateral light, etc., are such as to make additional expenditure of doubtful economy. So long as the county or district is not able to provide the housing facilities adequately by assuming bonded indebtedness, it must build, equip, and maintain schools both from State funds and county tax revenue. These funds are insufficient for maintenance alone. A sacrifice must therefore be made either in the kind of buildings furnished or in the quality of instruction given, as represented by the length of term and teachers' salaries. The county board and superintendent have cast their lot on the side of instruction by paying larger salaries and trying to secure more trained teachers. This is recognized as a necessary though unfortunate choice.

School supervision.—The distinctive advance made by the county educationally is toward professional supervision. The great bulk of time and attention, as well as money, is placed on the improvement of the classroom teaching. While by no means completely accomplished, the committee found greater advance toward professional supervision than in the other counties visited. This is evidenced by the systematic plans for the carrying on of special work and definite accomplishment along particular lines. There is evidence of a proper conception of organized supervision; a corps of teachers working in a unified manner toward definite ends; some professional spirit; loyalty to the system, and unity of educational purpose.

The course of study prescribed for the county is definitely divided into an elementary course of six grades, and a rural high-school course of three grades. The rural high schools are located at strategic points with reference to as many surrounding six-year schools as topography and road conditions permit. (See accompanying map.) Eight sessions of not less than six months each (the minimum term adopted by the county board) are required for completion of the elementary course and four sessions for that of the high school. Home project work, supervised by the county superintendent and his assistant, is given school credit in the last two years of the elementary course and throughout the rural high-school course. At least two years of home project work are required for the completion of the high-school course. A certain minimum of library reading is also required. Following are the home project courses: Management of hogs; management of cows; management of poultry; growing and canning of vegetables; growing of corn; growing of peanuts; cooking; sewing; making home conveniences; home care of the sick.

Supervision is carried on chiefly in the following ways: First, through teachers' meetings which occur every six weeks in the office of the county superintendent. These the teachers are required to attend. They are furnished in advance with definite subjects for discussion or instruction at these meetings. An opportunity is given the county superintendent to give necessary directions for the carrying out of proposed plans, and for the teachers to ask questions or discuss their needs in regard to them. Second, weekly letters outlining plans for teaching the elementary school subjects, including farm subjects through the home project work, are sent to each teacher. Third, reasonably frequent visits by the county superintendent and his assistant are made to all schools for the purpose of checking up the methods, of following outlines and other instructions, and of assisting the teachers in better methods of work.

A splendid effort is being made to link the school and home and to make the school work practical by teaching farming, especially those phases of it most needed in the county—stock raising, for example. In promulgating this work the superintendent has placed in each school 15 selected books on agriculture, and an annual subscription to "The Progressive Farmer." All schools visited were equipped with a rag-doll seed tester, and were making germination seed tests of corn. Emphasis is being placed on the necessity of thoroughbred stock raising for the county, and in this connection attractive agricultural posters are on the walls, and animal booklets are being made in connection with the language and agricultural classes.

The teachers.—The seat of a State normal school is at Florence, only a few miles by trolley from the county seat of Colbert County. This is partially accountable for the fact that many of the teachers have had training in this school. Nearly half of those visited were graduates of a normal school, or had equivalent education and training. About two-thirds were teaching for the first time in the schools visited, and about one-third had no previous experience. Tables 20 and 21 show the education, salaries, and experience in full of the entire staff, exclusive of the towns.

TABLE 20.—*Education beyond the elementary grades of teachers in Colbert County.*

Years of education beyond elementary grades.	Number of teachers having—	Percent.
1 year	3	5
2 years	4	7
3 years	13	23
4 years	14	25
5 years	9	16
6 years	10	17
7 years	2	3
8 years	1	1+
Total teachers reporting	56	

TABLE 21.—*Experience and salaries of teachers.*

Experience.	Number of teachers having—	Salaries.	Number of teachers receiving.
None	2		
1 year or less	12		
1 to 2 years	11	$60.00	1
2 to 3 years	9	62.50	1
3 to 4 years	3	65.00	18
4 to 5 years	3	70.00	22
5 to 6 years	6	75.00	11
6 to 7 years	6	80.00	3
7 to 8 years	2	85.00	3
8 to 9 years	0	90.00	4
10 years and over	3	95.00	1

Attendance on day of visit, Colbert County, Ala.

[Per cent present, 59.45.]

Enrollment:	Present.	Enrollment:	Present.	Enrollment:	Present.
72	30	37	25	28	27
33	10	38	28	71	50
25	20	59	34	25	18
46	23	83	42		
22	13	25	18	624	371
35	16	25	17		

Recommendations.—(1) The total school expenditure must be substantially increased. Money for maintenance through increased taxation and for buildings through bonded indebtedness will be necessary.

(2) New modern buildings should replace those now used, except in those places in which there are now State buildings. Probably 90 per cent of buildings observed were unfit for use.

(3) The term should be increased in length to nine months.

(4) More and better teachers are needed and higher salaries and a longer term are both necessary to procure them.

(5) Better high-school facilities are needed. The plan outlined for rural high schools on the 6–3 plan should be completed by one or

two senior high schools well located. The present county high school serves a small community only and is not a county high school in the right sense of the term.

V. MADISON COUNTY.

General background.—Madison County is in the northern part of the State in the Tennessee Valley. It is one of the richest and most productive of the strictly farming counties. The county seat, Huntsville, located near the center of the county, is the site of five large cotton mills. The Louisville & Nashville and the Southern Railways traverse the county. The population of Huntsville is between seven and eight thousand. That of the county, as a whole, is 47,041.

Corn and cotton are the most important and valuable of the farm crops. The total value of the farm crop production for 1918 was $12,500,000. The population is made up of 59 per cent native whites of native parentage, about 1 per cent foreign born or children of foreign-born parents, and 40 per cent negroes. Of the population between 10 and 21 years of age 2,004, or about 17 per cent, are illiterate.

School conditions.—The school officials of Madison County are making a special effort toward consolidation of schools and securing modern buildings. Though a complete program is in no sense accomplished in this county, the buildings are on the whole better than in the other counties visited. A number of new schoolhouses, built on the State plan, especially two-teacher and five-teacher schools were observed. These are equipped with new desks and hyloplate blackboards. Five new buildings of this character were built in 1918, and four additional ones are in contemplation for 1919. During the past year the county spent $21,691 on buildings and permanent improvements. More than half of this money was raised by subscription. The following statements concerning the status of schoolhousing are furnished by the county superintendent:

Buildings owned by the State	34
Building owned by the county	2
Buildings owned by private individuals or communities	21
Modern buildings meeting State requirements	38
School buildings with two toilets	35
School buildings with one toilet	17
School buildings with no toilets	5
Schools equipped with two sanitary toilets	11
School buildings equipped with hylo plate blackboards in good condition	38
Total white schools	57
Total colored schools	35

High-school facilities.—Madison County needs far better high-school facilities for the children in rural communities. The high school at Huntsville is open to children outside the district only on the payment of tuition. The county high school is located at the extreme southeast portion of the county near the Jackson County line. It is altogether inaccessible to children outside its immediate vicinity.

	Number of teachers.
Teachers' training:	
Elementary education only	1
One year high school training	1
Two years high school training	10
Three years high school training	11
Four years high school training	32
One year higher education	15
Two years higher education	21
Three years higher education	16
Four years higher education	16
Teachers' salaries:	
Number receiving $40 to $45.50	3
Number receiving $45 to $50	1
Number receiving $50 to $55	21
Number receiving $55 to $60	19
Number receiving $60 to $65	40

The schools are supported from funds received from the State and a county tax of 3 mills. The valuation for county taxing purposes is $13,500,000. The total amount received from the State and county for schools for the year was $104,521. Of this total $5,100 is for upkeep of the office of the county superintendent; $79,489 for teachers' salaries; $5,508 for maintenance; $3,095 for transportation; and $1,006 for other expenditures. The remainder was spent for buildings and permanent improvements.

The situation in Madison County, so far as upkeep of buildings and grounds is concerned, is unfortunately no improvement on the conditions as described for the State as a whole in a preceding chapter. There are, as stated, a number of new buildings. Most of these are well painted and attractive from the outside, but the majority, even of the new buildings, show utter neglect from the standpoint of cleanliness and care. The old buildings visited were in exceedingly bad condition. Most of them are unfit for school purposes from every standpoint.

The teachers.—Comparatively little actual teaching was seen in the county, as the visits were made near the close of the term. Examinations were being conducted and preparation for closing entertainments were being made in many of the schools. Such teaching as was observed does not depart from the kind described in the preceding chapter on conditions in the State. Some overcrowded rooms were found in the lower grades, and as occurred in most cases in the schools of Alabama, the children in the higher grades were few, while the lower grades were entirely overcrowded. The county is another example of the fact that the attempt to do high-school work results disastrously for all concerned.

The county high-school pupils are housed in an old building which was formerly a private school. It is in very bad repair and entirely unfitted from the point of view of sanitation, convenience, comfort, and equipment to supply the requirements of modern school housing. It is located on a good site of about 5 acres of ground. Recently the county built an annex for home economics and manual training. The annex is a very good building, though poorly equipped for teaching the subjects for which it was intended. It seems to the committee an unfortunate waste of money. It is badly in need of care. The shower baths, which should be an attractive part of the school, are not only unused but are becoming entirely ruined from neglect and abuse.

There are three teachers in the county high school, all of whom have normal or college training. The annual enrollment is 35 but when visited by the committee only 28 were in regular attendance. Of these 18 live in the immediate vicinity of the school, that is, in the town in which it is located. There are no good, reasonably priced boarding facilities, so that only those children near enough to reach the school from their homes can attend.

Besides the equipment for manual training and cooking and sewing, which if kept clean and in good condition would probably be quite adequate for a small high school, there is some equipment for the teaching of physics and chemistry. The total is valued by the county superintendent at about $1,000. The school is supported almost entirely by the State, from which it receives $3,000 per year. The county supplied $200 and $300 were received from other sources during the past year.

The high school is in every sense a State supported, local, rather than a county high school. This feeling on the part of the county board accounts for the fact that practically none of its support comes from that source. The building needs extensive repairs to make it at all fit for use. In fact, if the high school is to remain in its present location, the building should be replaced by a new one of modern type. Present conditions ought not to continue.

The committee is of the opinion that the county board would not be justified in placing the kind of buildings needed for a county high school in a rich county like Madison in so remote a location as the present one. Good high-school facilities are badly needed, and should be made accessible to as great a number of children as possible through convenient location and through the provision of means of transportation and boarding arrangements. The committee believes that the 7—4 plan prevailing in the county should be discontinued and the 6—3—3 plan installed. Under this arrangement the high school at Gurley would give good service as a junior high school, several of which are needed. It appears feasible and economical for this portion of Madison County to unite with certain communities in the western portion of Jackson County. This inter-county arrangement would provide sufficient funds for maintaining a good junior high school, and as soon as permitted by legislative action, the territory could be made into a taxing and bonding district, and then a proper building could be provided. When the new plan of organization is put into operation, one or two well-equipped senior high schools should be placed by the county board in carefully selected accessible places.

Recommendations.—(1) More generous school support and money for buildings is needed in this as in other counties, and should be provided soon. The committee believes that school building is progressing in this county rapidly, but considering the need for more schoolhouses additional funds are essential.

(2) A continuous term of nine months should be established. The present term is too short and its division into two parts intensifies its inadequacy.

(3) A course of study adapted to rural community needs and prepared for the 6—3—3 organization should be provided. The county has practically no vocational interests other than farming and would be a very suitable county in which to put in operation the plan as recommended with a course of study having a distinctly rural tendency.

(4) The county is very much in need of closer supervision following the plan recommended in Chapter VII. The facts that consolidation is becoming more and more extended; that the shape and size of the county make it possible to reach schools with relative ease; and that the population is relatively evenly distributed, makes the supervisory problem one which can be solved effectively through the county superintendent and a corps of assistant supervisors.

VI. ESCAMBIA COUNTY.

Escambia County is selected as typical of the grass and timber section of the State. It is located in the southwest part and borders on Florida. The county is rectangular in shape; about 54 miles long by 18 miles wide. Two branches of the Louisville & Nashville Railroad and the Florida & Gulf Railroad cross the county. Brewton, the county seat, is the largest town and is located near the center of the county. There is a county high school at Atmore in the southeast corner of the county, and one additional four-year high school located at Brewton.

Physical resources.—The surface is generally level; the soil rich and adapted to the growth of fruits, especially oranges and peaches. Raising of early strawberries is an important industry. Lumbering is probably the most productive industry of the county. Data on the value of lumber and turpentine produced and fruit crops are not available. The total value of field crops, cattle, and hogs produced in 1918 amounts to $4,269,000. It seems reasonable to believe that this amount would be substantially augmented by the value of strawberries, peaches, oranges, turpentine, and lumber. Timber is rated as the chief output. There are extensive stretches of uncut timberlands. Many portions of the county are indeed sparsely settled because of this, and one drives many miles through virgin timber to reach the schools found in the settlements on cleared land.

Unquestionably the county has economic possibilities and a bright future when the land is cleared and placed under cultivation. At present, however, timberlands are taxed on a very small valuation, from $1.25 to $4.50 per acre. Some idea of the amount of undeveloped and unsettled land may be gained from the fact that in spite of low valuations nearly 85 per cent of the total tax revenue is from the lumber and railroad companies. Land is retained in large tracts and there are relatively few small owners. In general the tenant farmers and the employees of lumber companies support the homes from which school children come. The total population of the county in 1910 was 18,889, of whom 13,156, or 69 per cent are white, and 5,569, or 30 per cent, approximately, are negro. There are in the county 590 persons from 10 to 20 years of age, that is of school age, who are illiterate. This is 12½ per cent of the total population from 10 to 20 years of age.

System of taxation.—Escambia County is one of the few in the State which levies not only a county tax, but a local district tax in all but two of the districts. In addition to the county and district levies, three districts have succeeded in borrowing money through notes of the trustees—the amounts are respectively $1,000, $1,500, and $2,000. This money is used for buildings and repairs. To pay these notes the district pledges its local tax for as many years as are necessary to pay the full amount of indebtedness. This means, of course, that no additional expense is involved. The notes merely represent drawing in advance on regular tax fund. The plan enables a district, however, to provide a building, if an inexpensive one will serve, immediately, when otherwise a delay of several years is necessary. The assessed valuation of the county is $7,466,284. The receipts for the school year just closing were as follows: From State funds, $22,565; from county tax, $21,566; from district tax, $17,538, a total of $60,965. Of this amount $6,820 was spent for repairs and equipment; $3,645 for administrative expenses, and the remainder for buildings and teachers' salaries.

School sanitation.—Here, as elsewhere, a choice must be made between decent buildings in which to house the school children, and reasonable classroom efficiency as represented in teachers' salaries and length of term. To secure both is patently impossible with the totally inadequate funds at the disposal of the board. The board of education, therefore, after consideration, decided that buildings fit to shelter children must be obtained first—even at a sacrifice of other essentials. Distinctive progress has been made toward this end though it is far from completely accomplished. Black boards of hyloplate in sufficient quantities and patent desks have been installed this year in practically all the school buildings, replacing painted boards and homemade benches.

This county, like many others in Alabama, had entirely disregarded sanitary essentials when providing buildings. There was a disgraceful lack of toilets such as satisfy the demands of mere decency. Thirteen schools are now supplied with two sanitary toilets built according to the State plans. Fifteen additional schools have two toilets of some kind, not sanitary, however, and some of them in very bad condition. Eighteen schools still have but one, and twelve have none whatever.

Pure water within reasonably easy access and available at all times for drinking purposes as well as for washing hands is obviously a simple necessity for every school. However, neighbors' wells or impure springs have for years been the source of supply for the majority of schoolhouses in the county, and no method of keeping the water in the building other than open pails and common dippers was provided. The task of supplying good wells and sanitary coolers was assumed by the board for the present year. A systematic campaign for these and other essentials was carried on in part through a system of standardization. Requirements for the different classes of standard school are very moderate, yet progress is being made and ideals are gradually being instilled. A substantial improvement is noticeable between those schools standardized and those which are not. Accomplishments in this regard are shown on the map and following are requirements for each class of standardized schools:

SUPERIOR.

1. State buildings with two rooms or more employing two teachers.
2. Yard well kept and all trees on school grounds whitewashed.
3. Buildings painted.
4. Plenty of hyloplate blackboard, decorated.
5. Seated with patent desks.
6. Library and bookcase.
7. Some good well-framed pictures on walls in each doom.

8. Sanitary toilets.
9. Wholesome water supply on school grounds.
10. Sanitary drinking fountains.
11. School organized into active improvements, war savings or Red Cross society.
12. Good display of school work on walls.

EXCELLENT.

1. State building, painted.
2. Well-kept yard with trees whitewashed.
3. Two toilets.
4. Seated with patent desks.
5. Library.
6. Hyloplate blackboard, decorated.
7. Individual drinking cups.
8. Good display of school work on walls.
9. School organized for some form of war work.

FAIR.

1. State building.
2. Well-kept yard.
3. Seated with patent desks.
4. Hyloplate blackboard.
5. Individual drinking cups.

POOR.

1. Land not deeded to the State.
2. No patent desks.
3. No hyloplate blackboard.
4. Yards poorly kept.
5. No individual drinking cups.

Under the old régime of district control no records worthy of the name were kept either by the teachers or superintendent. A splendid system is now installed for both school and office records. Daily, monthly, and annual reports are required of the teachers and are systematically inspected, corrected, and filed. The old idea of private ownership of school grounds and buildings is being eradicated gradually and legally recorded deeds are being required by the board. Plats of school grounds with attached deeds and even the unfortunate loss of school sections within the county is being investigated with the possibility of recovering some of this now valuable property.

Instruction.—Salaries and qualifications of the teachers of the county are given in the following tables:

TABLE 22.—*Salaries and certificates of Escambia County teachers.*

Receiving per month:	Teachers.
$40	36
$50	38
$55	10
$60	27
$65	13
Total	124

TABLE 22.—*Salaries and certificates of Escambia County teachers*—Continued.

	Teachers.
Grade of certificate:	
First	40
Second	46
Third	35
Life	3
Total	124
Classification for last year:	
First	29
Second	47
Third	36
Total	112

TABLE 23.—*Education of teachers in Escambia County.*

Years of education beyond elementary grades.	Number of teachers having—	Per cent.
1 year	6	14.6
2 years	8	19.5
3 years	3	7.3
4 years	11	26.8
5 years	1	2.4
6 years	11	26.8
7 years	1	2.4
8 years		
Total teachers reporting	41	100

Teachers are classified by the county board according to their qualifications and ability, with salaries of $40, $45, and $50 for third, second and first class, respectively. These salaries are supplemented from funds raised through district taxation and reach a maximum of $65 with an average of $55 for the county. The school term is six months. In most cases it is divided into two sections.

The classroom instruction is of the kind described in the preceding chapter and little teaching of a high quality was found by the committee. It was practically all on the "lower plane" as distinguished by Dr. McMurry, meaning that "it shows that neither teachers nor supervisors are looking beyond the storing of knowledge and the acquisition of mechanical skill." Evidences of supervision are apparent throughout the county; for example, topographical maps, drawings, written work, and the like are displayed in practically all the rooms. However, supervision is not close enough to influence the methods of teaching to any notable extent, and there is no evidence of unified aim and purpose among the staff. With a teaching body of 124, more than half of whom are in one-teacher schools, one supervisor is quite inadequate. This is especially true when the force is largely untrained, inexperienced, and new to the work in the particular county and school. Indeed, even trained teachers easily fall back into routine methods of teaching without the spur of careful direction and surveillance.

Consolidation of schools.—Escambia County has 53 one-teacher, 13 two-teacher, 4 three-teacher, and 4 four-teacher schools. The two towns, Brewton and Atmore, have five or more teachers. The prevailing type in the county is the one-teacher school, of which there are altogether too many, even allowing for the relatively unsettled condition of a large portion of the county and the ever-present road problem. Consolidation in this county is not so much a matter of educating the people to the desire for centralization, as to educating them to the appreciation of the value of education and the necessity of paying for it with reasonable liberality. Consolidated school buildings cost money and this the people are reluctant to supply. Some progress is being made, however. The board is in many cases refusing new buildings until consolidation can be effected. People should also understand that even money value of land is increased by good school buildings and qualified teachers, as well as the fact that the progressive citizens needed to develop the county will settle there only when educational facilities are furnished for the children. A certain citizen who paid $13,000 for a farm near McCulloch in the western part of the county is authority for the statement that he would not have paid more than $6,000 if it were not for the proximity of the consolidated school.

Attendance on day of visit, Escambia County, Ala.

[Per cent present, 66.83.]

Enrollment:	Present.	Enrollment—Con.	Present.	Enrollment—Con.	Present.
52	42	92	69	24	22
43	35	41	25	28	12
44	22	89	51	45	22
50	25	31	24		
29	26	41	28	609	403

Escambia County is not poor in land and resources. If it is to be developed to its fullest possibilities it must be peopled by an intelligent citizenry, trained in efficient public schools. Such schools it is the duty of the county to supply, even if a sacrifice be necessary. The committee found the county board and superintendent able, broadminded, and alert. It is convinced that the money supplied will be used economically and for the best interests of the children.

Recommendations.—(1) More and better buildings and more liberal support for schools must be provided. The assessed valuation of the county is exceedingly low. It should be raised, and the 3-mill limit raised as soon as the legislature makes it possible. A scheme for consolidation and a systematic building program for the county should be inaugurated and consummated at the earliest possible date. The schools suffer for every month of delay.

(2) Better salaries and longer terms must be established in order that experienced teachers may be secured.

(3) At least one additional supervisor, preferably a primary supervisor, should be engaged at once. The amount now paid to the county agent by the board of education, from which the schools receive only remote, if any, benefit, if augmented by another $600 or $700 would probably secure a satisfactory person. Later, other supervisors should be engaged.

(4) A continuous term of nine months should be established as soon as funds are available. The division of a short term of six months into two parts makes efficient work impossible.

VII. PICKENS COUNTY.

Pickens County is selected as an agricultural county in which progressive methods of farming are not yet followed. In the proportion of white and negro children it is reasonably typical of counties of this class.

It is situated in the western part of the State and embraces an area of 875 square miles, with a population, in 1910, of 25,055. Of these 51.7 per cent are colored.

Agriculture is the leading industry, the principal products being cotton, corn, and hay; oats, sugar cane, and other crops are grown on a rather small scale and meet the local demands only in part. Except in the case of a few of the most progressive farmers, present methods of farming are practically identical with those which have been in use for years. The greater part of the country is hilly, broken and rough; other portions are level or gently rolling. The northern part of the county has much timber, which is being rapidly cut away. Lumbering in this section has attracted many from the farm, especially white laborers.

Financing the schools.—The assessed valuation of Pickens County is $4,815,080. As in other counties, it is only a small fraction of the real value. Farms selling at $50 to $75 an acre are assessed at $10 or $15, or even less. At a conservative estimate, the assessed valuation could well be 12 millions. There is a county tax of 4 mills, the maximum permitted, but not district tax. Tuition is charged in all towns in order that the schools may be in session eight or nine months. The town of Aliceville, for illustration, charges $5 a month for the eleventh grade; $3.50 a month for grades eight, nine, and ten; $3 for grades four, five, six, seven; and $2.50 for grades one, two, and three. Tuition in the eleventh grade is charged during four months; in all other grades for two months. At Carrollton there is a matriculation fee of $2.50, a monthly fee of $1 for each of the elementary grades, and of $1.50 for each of the high-school grades. This and the State funds are entirely insufficient for support and buildings. The total amount spent for schools for 1918 was $8.28 for each child.

Administration and supervision.—Legally the county board of education acts upon the recommendations of the county superintendent of schools, who nominates all teachers. In many cases however the district trustees take the initiative. The county superintendent and the county board merely ratify the choice of the local boards. No doubt these boards should be consulted regarding the selection of teachers, but all nominations should originate with the county superintendent and appointments made by the board.

The county superintendent can not supervise effectively unless assistants are provided. There are so many duties to which he must attend that he has but little time for the supervision of instruction. He must look after the finances of the schools; carry out a building program; keep the people informed as to the needs and make plans for the future; in short, he must be the educational leader of the community. Since few teachers have had adequate preparation, they must be improved in service. This can not be done without assistant supervisors.

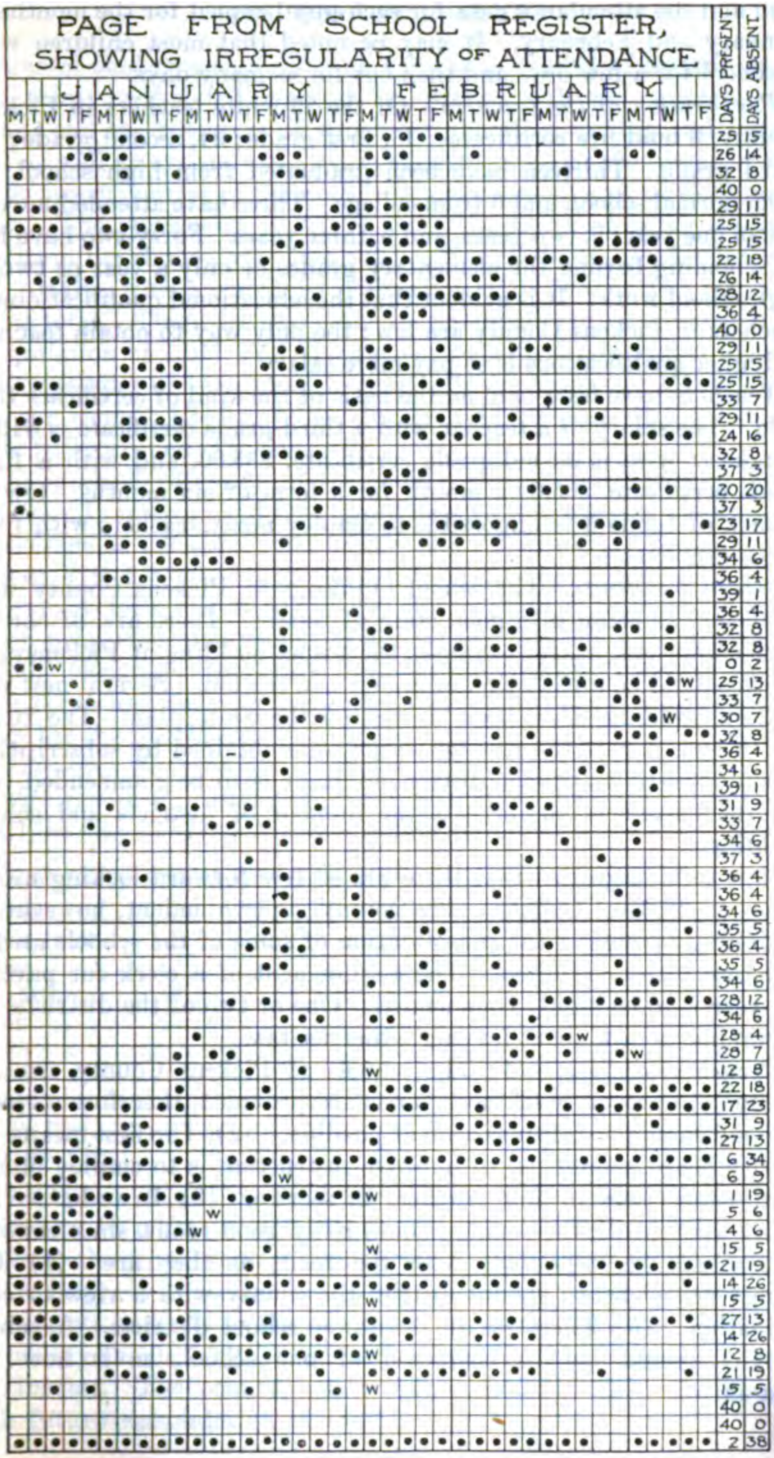
City systems with better trained teachers and school buildings close together employ several supervisors for the same number of teachers as Pickens County has. A supervisor of music should be among those employed and music should be one of the school subjects. At present it is not taught at all in the county.

Among the commendable things that the county superintendent is doing to help teachers grow professionally is the organization of reading circles in several sections of the county; but these reading clubs, valuable as they are, do not take the place of constructive criticism of classroom teaching. There should be enough supervision to see that the teachers make intelligent use of what they read.

Consolidation of schools.—The county school board until recently has been increasing instead of diminishing the number of school districts. As a result there has been little consolidation of schools. The tendency has been to erect school buildings in every district asking for one. The consolidation of schools has not been considered seriously either by the school officials or by the patrons of the schools. There is in the county only one transportation wagon. One reason consolidation has not been seriously discussed is that the roads are almost impassable in winter, especially the roads crossing or paralleling the many sluggish streams. Yet in spite of poor roads some consolidations could be effected. At least, the plan of dividing school districts and erecting one-room school buildings could be abandoned. As an illustration, a new one-room building has been erected about three miles from Reform, though the children attending this school could well be transported to the school at Reform. Similarly, other consolidations might be effected. In the northeastern part of the county, four schools—New Hope, Carroll, Cross Roads, and Hargrove—might be consolidated at Shiloh Church. In the eastern part of the county there was once a school at the point indicated on the map where six roads center. This school enrolled 180 pupils, but new districts were formed and several schools are attempting to do what one good consolidated school could do much better. The schools that could be consolidated here are Center Springs, May, Flatwoods, Brannen, and possibly Kenny Hill. Other illustrations could be given. Consolidation, however, can not be effected until the roads are improved and there are more funds to transport the children. If a sentiment for consolidation were created, better roads would result. The practical plan for Pickens County is to form a good consolidated school at some point where it will most likely prove successful. Shiloh Church would probably be the best location. After this school proves successful other consolidations could be effected. In the meantime the school board should district the county, looking forward to consolidation.

School attendance.—The school registers of the county were examined and it was found that attendance during the compulsory period was but little better than during the other months of the year. The attendance during the compulsory period would naturally be better because it comes during the months when there is no work on the farms. The poorest attendance is in the fall of the year, when the crops are being gathered, and in the spring when the crops are being planted. During these seasons the attendance in many schools is about one-half what it should be. Few of the older children are in school. As one goes by farms in the spring of the year, many children may be seen in the fields. Data were collected from 21 classrooms regarding attendance. Of 455 pupils enrolled during the year, 317 are now (April) enrolled. On the day the writer visited the schools 270 were present. Three town schools where the attendance is better than in the country districts are included. One school a short distance from Carrolltown which had a total enrollment of 44 now has only 18, of whom 13 were present on the day of the visit. The total enrollment of white children in the community up to March was 2,805. At the end of February there were enrolled 2,237. The average attendance up to that time had been 1,733, or 60.7 per cent of the total enrollment.

That a picture might be had of school attendance in Pickens County three school registers for the year 1918 were selected at ran-


PAGE FROM SCHOOL REGISTER,
SHOWING IRREGULARITY OF ATTENDANCE
JANUARY
FEBRUARY
M T W T F M T W T F M T W T F M T W T F M T W T F M T W T F M T W T F M T W T F
W

DAYS PRESENT	DAYS ABSENT
25	15
26	14
32	8
40	0
29	11
25	15
25	15
22	18
26	14
28	12
36	4
40	0
29	11
25	15
25	15
33	7
29	11
24	16
32	8
37	3
20	20
37	3
23	17
29	11
34	6
36	4
39	1
36	4
32	8
32	8
0	2
25	13
33	7
30	7
32	8
36	4
34	6
39	1
31	9
33	7
34	6
37	3
36	4
36	4
34	6
35	5
36	4
35	5
34	6
28	12
34	6
28	4
28	7
12	8
22	18
17	23
31	9
27	13
6	34
6	9
1	19
5	6
4	6
15	5
21	19
14	26
15	5
27	13
14	26
12	8
21	19
15	5
40	0
40	0
2	38

FIG. 17.—The dots indicate daily absence from school.

dom and the attendance data for each pupil copied for the months of January and February. It may be noted that most children were in school for a few days and then out for as many days.

Preparation of the teachers.—Of the 85 white teachers in Pickens County, 6 hold life certificates; 15, first grade; 34, second grade; 30, third grade. Thirteen have been graduated from high school; 12 from normal school, and 6 from college. Three have attended normal school one year; 6, two years, and 3, three years. Forty-two have had no schooling beyond the elementary grades or only a year or two of high-school work. It is evident that the educational qualifications of teachers in Pickens County are low; the only way to obtain teachers of higher qualifications is to pay more salary.

Teachers have been paid on the basis of the kind of certificate they hold. The salary of a teacher with a third-grade certificate is $45.00 a month; with a second-grade certificate, $55.00, and with a first-grade certificate, $65.00 a month for a term of six months. Owing to lack of funds it is impossible to employ many teachers with first-grade certificates.

School buildings.—The school buildings in Pickens County may be classed as being in a good state of repair. There are, of course, some exceptions, as, for example, the school building at Pickensville, which should be torn down and a new one erected. Several new and modern buildings have been erected on the State plan. The funds for the erection of the new buildings were obtained by subscription. The movement to provide better buildings is to be commended, but not the movement to increase the number of districts and school buildings.

It is to be regretted that there are so few forward-looking movements in Pickens County. The county superintendent, however, is beginning to suggest the consolidation of some of the schools and to advocate better buildings. The employment of a clerk for part of the year is to be highly commended. One or two of the districts are beginning to talk about levying a district tax.

Recommendations.—(1) The schools of Pickens County can not be much improved until more funds are provided, therefore steps to this end should be taken as soon as possible. (2) The first means the county board should use to improve instruction is to employ one or more supervisors to help teachers in service. (3) In order to improve the schools, the county should build good roads, since consolidation will be impossible with the roads as they are. (4) The county school board should district the county with a view to consolidation. (5) There should be fewer school districts. A school district should not be composed of one school, as is now the custom.

VIII. ETOWAH COUNTY.

General backgrounds.—Etowah County is typical of several small and thinly populated counties in which coal and mineral are found, and the resources of which are therefore mining and industrial as well as agricultural. It is situated in about the center of the northeastern quarter of the State, and embraces an area of 542 square miles. The population is 39,109, only 17.4 per cent being colored.

Within the county are three small cities, Gadsden, Alabama City, and Attalla, with a combined population of 17,393, or 44.5 per cent of the total. There are two other incorporated towns, Altoona with a population of 1,071, and Walnut Grove with a population of 204. The remainder of the county is rural. In the cities are cotton mills and car shops. Coal is mined in the western part of the county, principally around Altoona.

The assessed valuation of the county, the cities included, is $13,500,000. It is estimated that property in the county is assessed on an average at not more than 28 per cent of its value. In many instances it is not more than one-tenth of the real value. For illustration: A farm for which $6,600 was refused is assessed at $600. Other properties that would easily sell for $25,000 are assessed at $4,000. Generally there are two entirely different values placed upon farms and business properties—one for the tax assessor and the other for the purchaser.

Financing the schools.—There is a three mill county tax, and a district tax in 10 districts. The funds raised by each district are small, as may be noted from the following table:

TABLE 24.—*Amount raised by district tax in each of 10 districts.*

Glencoe	$800
Hokes Bluff	165
Moody	250
Oak Grove	85
Ewing	170
Amora	190
Ivalee	375
Beard	150
Mount Zion	325
Alabama City	3,000

The money raised by local tax is used to help erect new school buildings, to make improvements and in some cases to add a few weeks to the school term. Though the amount raised by district tax is not large, it is needed in all districts to take care of school improvements and add to the salaries of teachers. If every district in the county should levy the special tax $40,500 could be added to present income. The county board should first redistrict the county with future consolidation in mind.

Administration and supervision.—The school board of Etowah County elects a county superintendent of schools and then holds him responsible for results. He makes his recommendations to the board. These are acted upon and the superintendent is directed to carry out the action of the board. For illustration, the board after voting to investigate the possibilties of opening schools for illiterates directed the county superintendent to make a study of the situation and to report his findings and recommendations regarding the establishment of such schools. This is a much better plan than that of appointing a committee composed of several board members.

The county board permits the superintendent to look anywhere for teachers. He may even bring them in from another State, which he does. The district trustees, while consulted regarding school improvements needed, do not take the initiative in the selection of teachers. This is as it should be.

One of the needs of the county is more and closer supervision. The first step would be to employ a clerk for the superintendent so that the latter may have all his time free for administrative and supervisory duties. As it is, he must spend no small part of his time in clerical work, typewriting letters, compiling data, keeping books, etc. It is uneconomical to pay a superintendent $1,800 a year and then require him to do the work of a clerk who could no doubt attend to clerical duties better than the superintendent.

In addition to the clerk, assistant supervisors should be employed. A primary supervisor is most needed and should be appointed at once.

Careful observation was made by a member of the survey committee of the teaching in many of the schools of Etowah County. While most of the teachers are faithful and earnest many need more help than they are receiving. Not a few were falling just short of success for want of assistance. The county superintendent, it is true, visits the teachers several times a year for short periods, but his visits are necessarily so few and so brief that he can not follow up the directions that he gives the teachers. He does not have time to help them plan lessons. Few of the teachers understand how to teach reading in the primary grades. Children in the second and third grades read no better than children should in the first grade. A supervisor skilled in the teaching of reading could change all this.

School attendance.—Although the school term in Etowah County is 7 months long, many of the children enrolled attend but a few months. Most of the older pupils do not enroll until after school has been in session a month or more, and as soon as the time for planting arrives they drop out of school. The latter part of April, when one of the survey committee visited the schools, it was necessary for the county superintendent to order several to close because the attendance had dropped so low. In the 35 classrooms visited the enrollment had fallen from 1,571 to 992. There were present on the day the schools were visited only 656, or 41.7 per cent of the total enrollment, and 66.1 per cent of the enrollment when the schools were visited.

The total number enrolled in the white schools up to April was 5,360, the number enrolled in the month of March was 4,082, and the average attendance up to April was 3,242.

As recommended elsewhere in the report, the compulsory attendance law should be in force for the entire school year, but even if it were, a sentiment for better attendance would need to be aroused. The necessity of attending school for 7 or more months must be made evident to the parents, the majority of whom keep their children out of school to work on the farms in the fall and spring. Teachers can do more than any other persons, if they make school work interesting, and make personal visits to the homes, explaining to parents why children should attend school for the full term. In several schools visited the attendance had been good for the entire year; few had dropped out for the spring work. The teachers of these schools were community leaders, the parents had confidence in them, the children preferred school to farm work.

Teachers' salaries.—The salaries of teachers in Etowah County are based partly upon the kind of certificate held and upon experience, but the largest factor is ability in classroom management and instruction. The salaries for teachers and principals range from $45 to $125 a month for 7 months, distributed as follows: Thirty-six teachers at $45 to $55; 42 at $56 to $65; 21 at $66 to $75; 9 over $75.

Preparation of teachers.—The qualifications of teachers measured by the kind of certificates held are low, 36 holding first grade certificates, 42 second grade, and 33 third grade. As soon as the supply of teachers becomes greater or as soon as the funds warrant, no teachers with third-grade certificates should be employed. The average teacher in the county has completed an elementary school course of 7 grades and two or three years of high-school work. A few are normal school graduates. A majority have taught less than four terms.

Buildings, grounds, and equipment.—There are in the county, exclusive of the cities, 79 school buildings for whites and 5 buildings for colored. Only those erected within the past few years are properly lighted. About one-half of the older buildings may be rated as in a fair state of repair, one-fourth as good, and one-fourth as poor. Some of the districts are taking pride in keeping the school buildings in good condition. This is particularly true of the districts that have levied the special tax.

The school grounds average from 1 to 2 acres and the play space from one-fourth to one-half acre. A few are equipped with basket-ball courts. None of the school grounds have school gardens. About one-fourth of the schools have only one outhouse. Not a few of these are in a poor state of repair and in poor sanitary condition. At about two-thirds of the schools there is a spring or well in or near the school building. A neighbor's well furnishes the drinking water for one-third of the schools. The drinking water is kept in open pails at one-half of the schools and in closed receptacles at the others.

The desks in three-fourths of the schools are unadjustable double desks. In a few schools there are adjustable single desks. The teaching equipment is meager. In most school buildings there is insufficient blackboard space. Maps and other teaching aids are rarely seen. The school board at a recent meeting, realizing the need of better teaching equipment, voted upon the recommendation of the county superintendent, that the county board would pay one-half the cost of the teaching equipment recommended by the superintendent provided the local district would pay the remainder.

Consolidation of schools.—Owing to a lack of funds and to the mountainous character of the country no attempt has been made to consolidate schools where transportation is required. A good consolidated school has been effected at Bryce by uniting two other schools with the one at that place. Instead of three poorly equipped one-room school buildings there is a modern three-room building with rooms for manual training and home economics, which will probably be introduced next term.

Consolidation could be effected at several other points in the county but transportation would be necessary. It would be well for the county board to district the county looking toward consolidation and then at the earliest moment provide transportation for children attending one-room schools that could be consolidated.

Plans for future.—Some plans just adopted or that are likely to be adopted within a year or even less are: Summer schools for illiterates, a clerk for the county superintendent of schools, one assistant supervisor to have supervision of instruction in the primary grades, the purchase of teaching equipment, the redistricting of the county, and the introduction of a vocational agricultural school.

Recommendation for improvement.—All the foregoing plans should be put into operation at the earliest possible moment.

It is further recommended that:

(1) The county board should employ assistants to supervise instruction in all grades.

(2) Add the constitutional one-mill tax so as to make the tax rate four more mills. This would net the county about $13,000 extra.

(3) The school board and the county superintendent should make careful study of the location of school buildings and district the

county with future consolidations in mind. A district tax should be levied on every district after this has been done.

(4) A campaign for better school attendance in the fall and spring months should be waged, and the compulsory attendance law enforced.

(5) The county superintendent should not accept a teacher's monthly report until it has been made correctly.

(6) The teachers should be required to keep the school buildings clean, well swept, and dusted.

IX. CHAMBERS COUNTY.

General background.—Chambers County is situated in the eastern part of the State and embraces an area of 588 square miles. It was selected for special study because it is typical of a good cotton growing and manufacturing county. With the exception of a small section in the eastern part, it is largely rural. There are five towns in this section, all engaged in the manufacture of cotton goods. Lanett, the largest, is an independent school district. Four others, Shamut, Langdale, Fairfax, and Riverside, have each a population of less than 2,000. The other towns in the county are in the farming section. They are Lafayette, the county seat, Fivepoints, and Milltown. The principal crop is cotton. As one rides through the county one sees hundreds of acres under cultivation, broken here and there by small patches of woodland. The soil produces abundantly. Prosperity among the farmers may be noted on every hand.

The assessed valuation of the county, which is recognized as one of the best farming counties in the State, is $9,500,000. The large cotton mills at the five towns are included in this valuation. From inquiries made among business men and others it is evident that this valuation of property is very low. It could easily be three to five times what it is without exceeding the real value. The population of the county is 36,056. There are 17,396 whites and 18,660 negroes, the negro population being 51.8 per cent of the total population. The white population is native born.

Financing the schools.—Chambers County has voted the 3-mill county tax in addition to the 1-mill constitutional tax. None of the districts have levied the special district tax, but several contemplate doing so. In order that the schools in several of the districts may be in session for 9 months instead of 8, as provided by the county board, and in order to obtain teachers of higher grade than the funds allotted the district permit, several districts supplement the county funds by tuition fees and by donations. The cotton mill corporation is an example. The company adds $5 to the salary of each teacher, and pays for an extra month of school. It also provides free textbooks. All the school buildings in the mill town have been erected by the mill company and are its property.

At Lafayette an incidental fee is charged each pupil and the city council makes appropriations for an extra month of school. At Five Points all the money raised for municipal purposes is expended on the school. Most of this fund, however, is used to pay interest and to provide a sinking fund for the payment of bonds issued for the erection of a new school building. A small incidental fee is charged each pupil.

As in most other counties in the State, there is a lack of funds due in part to the low tax valuation. If the assessment were doubled the county would derive $38,000 in addition to what it now does. This would enable the board to employ teachers holding first-grade certificates. Each district should levy a special tax, which should be used for building purposes and for upkeep of school property. In this way $28,500 more could be expended on the schools in the county.

Administration and supervision.—The school board of Chambers County wisely places responsibility upon the county superintendent. He studies the needs of the schools and reports to the county board, which acts upon his recommendations. The local trustees are consulted regarding educational matters in their respective districts, but do not select teachers. The principals at Lafayette and at the mill towns are consulted when teachers are selected for their respective schools, since they are more familiar with the work of the teachers under their supervision than is the county superintendent. The annual budget is estimated by the county superintendent. The writer attended a meeting of the Chambers County board of education when it was discussing the estimates of the county superintendent which were $2,000 more than the funds warranted. The board directed the superintendent to find some way to provide the $2,000 needed, and to report at a special meeting. He found that by making certain consolidations $2,000 could be saved. The plan of placing full responsibility upon the county superintendent can not be too highly commended. He is employed by the board to manage the schools. It would be a waste of funds not to permit him to do so.

As in many other counties, the schools of Chambers County are under-supervised. At present the county superintendent performs much work of a clerical nature. He should have a full time clerk, and as many additional supervisors as are necessary to carry out the plan advocated in this report. One of the county supervisors might well be assigned to the schools in the four mill towns provided the staff were large enough. All principals should have free time for supervision.

The plan of having a high school in each of the mill towns in Chambers County entails a waste of money and energy, and is less efficient than one high school for the four towns, which are under the management and control of the county board of education. If it is not feasible to consolidate the high schools in the five towns, the pupils at Shawmut, Langdale, Fairfax, and Riverview should be sent to some central point. The street-car line through these points makes transportation easy. At present classes are too small for interest or economy. At Riverview there were only 4 pupils in the eighth grade and 5 in the ninth. The largest high school at Fairfax enrolls 28 in the eighth grade, 5 in the ninth, 7 in the tenth, and 4 in the eleventh. In the month of February the total enrollment in the high-school grades of the four towns was 74, and 8 teachers were employed. If there were one central high school for these 74 pupils, fewer teachers would suffice. However, the saving in the number of teachers and in the amount of money expended is of less importance than efficiency. Home economics could be taught more effectively; industrial work introduced; a wider range of subjects offered; and more interest would be aroused in the school.

Consolidation of schools.—One of the best examples of consolidation of rural schools in Alabama is to be found at Five Points, Chambers County. This consolidated school was formed by combining three country schools with the school at Five Points. The school term at each place had been 7 months. Now the children attend 9 months. The total attendance in all the schools consolidated was 113. Now there are 190 pupils. Before consolidation the high-school enrollment was 13, and now it is 52. The increase in enrollment in the elementary grades has been 68 per cent and in the high school 300 per cent, while the expense of conducting the school has increased only 50 per cent.

Other consolidations are possible since the roads are in good enough condition for transportation. Six roads center at Penton where there are three teachers and 90 children enrolled. Two other schools, Chapel Hill, which is 1½ miles east, and Red Hill, which is 2½ miles west, could be consolidated with the Penton School. There are two teachers and an enrollment of 40 at Chapel Hill, and two teachers and an enrollment of 45 at Red Hill. Only a few of the children attending these two schools would need be transported. One good school with six or seven teachers and an enrollment of 175 or more pupils would be possible. La Fayette might well be the center of consolidation for Morefield, Hamburg, and Rutledge. Hickory Flat, Stroud, and Welsh could be consolidated at Welsh for the elementary grades, while the high-school pupils were transported to Five Points. Other possibilities will suggest themselves to those familiar with the county.

Arrangements have been made to consolidate several negro schools at La Fayette, and to provide a training school in connection with this consolidated school. In the northern part of the county, three colored schools will be abandoned, and a consolidated school established.

Buildings, grounds, and equipments.—For several years but few repairs were made on the school buildings, and as a result some of them became more or less dilapidated. At present the county board of education is encouraging the local communities to keep their school buildings in a good state of repair. Of the rural school buildings visited in the county, the majority may be ranked as being in a fair state of repair, many in poor condition, and a few in a good condition. Most of the buildings could be kept cleaner than they are. Practically all are swept with a broom without sweeping mixture. An exception must be made of the building at La Fayette. Since most of the buildings were erected some years ago, the lighting arrangement does not meet modern standards. In most buildings there are cross-lights, the light generally coming from both the right and left and in not a few instances also from the rear.

The school grounds average from one to two acres with about three-fourths of an acre additional, on which are often found basket ball courts, but no other play equipment. Outside toilet facilities are usually provided for both girls and boys. At a few schools, however, there are no toilet facilities, and at a few others only for girls. The sanitary condition of most of the toilets should be improved and should be more carefully inspected, repaired, and cleaned.

The school desks as a rule are double and stationary. A few of the newer desks are single. The teaching equipment is meager. Here and there in the rural school a map or globe may be seen. Reading charts for the primary grades are not provided except in several of the town schools. There are a number of good libraries. Those of 85 schools are valued at $10,404. Now and then one enters a classroom made attractive, as are those at La Fayette, by well selected pictures. Teachers in other schools in the county should take the classrooms at La Fayette as models in this particular.

School attendance.—Parents in Chambers County have not yet realized that the child that is not kept in school regularly for the full term can not make satisfactory progress. As in other sections of the State farm work has precedence over school work. The immediate income of the farm is tangible, while the value to the child of having his life broadened and enriched by the school is not so near nor so tangible. One of the weaknesses of the schools is the poor attendance in the fall of the year and in the spring. For example, the enrollment in the schools visited was 969 for the year. Of this number 707 were enrolled in April. Of the 707 enrolled only 548 or 56.5 per cent of the total enrollment were present the day the schools were visited.

Preparation of the teachers.—A majority of the teachers in Chambers County hold life or first grade certificates; 25 hold life certificates; 56, first grade; 49, second grade, and 4 third grade. Of the teachers reporting 15 per cent have not attended school beyond elementary grades except possibly a summer term or two at a normal or college. Only 40 per cent have graduated from high school, 10 per cent from normal school, and 3 per cent from college.

Teachers are paid according to the grade of certificate held. A teacher holding a first-grade certificate receives $62.50; one holding a second grade certificate $52.50, and one holding a third grade $47.50 a month for a term of eight months. Principals of graded and town schools receive from $75 to $150 a month.

Plans for future.—The county superintendent and county school boards are emphasizing the need of better school buildings and of school consolidation. The aim is to eliminate the high-school grades taught in the one and two teacher schools and to have all children pursuing high-school subjects attend the county high school or one of the other high schools in the county. A special study of health conditions is under way and the school board will adopt such plans as may be feasible for the improvement of the health of school children. Two Negro consolidated schools will be established next term.

Recommendations.—1. The county board of education should employ a full-time clerk for the county superintendent and several assistant superintendents or supervisors.

2. The plan of having a high school in each of the mill towns should be abandoned and one high school established for the children attending the high schools at Shawmut, Langdale, Fairfax, and Riverview.

3. A better system of records should be kept. The county superintendent should not accept a teacher's report until she has compiled all the data required.

4. The county should be redistricted with future consolidation in view.

Chapter IX.

NEGRO EDUCATION IN RURAL ALABAMA.

Size and distribution of Negro population in the State.—According to the census of 1910, the Negro population in Alabama was 908,282, forming 43 per cent of the total population of the State. The Negro population of Alabama is smaller than that of either Georgia or Mississippi, and does not constitute so large a portion of the State's population as it does in the two adjoining States. The presence of the Negro, however, complicates the educational problem to the extent that it makes necessary the maintenance of two school systems, one for each race. But it should be borne in mind that even if the entire population of the State were white, it would be necessary to provide far more teachers and schoolhouses than are now provided for the white population, with a resultant increase in cost to the State.

The proportion which the Negroes form of the total population varies greatly in the counties. There are 21 counties where the Negroes outnumber the white people. These counties, referred to as the "black belt," form a block extending across the south central portion of the State. On the other hand, there are eight counties with less than 500 Negro children of school age, according to the State biennial census of 1918. With the exception of Cleburne County, the "white" counties—those with less than 12½ per cent of their population Negro—form a belt across the northern portion of the State. Numerically, the Negro population is largely massed in the "black belt." The census of 1910 showed that the 21 counties where the Negro population exceeded the white have practically 490,000 Negroes, as against 418,000 in the other counties; and 90,617 of those living outside the "black belt" were in Jefferson County.

While the Negroes of Alabama form only 43 per cent of the total population, they constitute 52.9 per cent of all the persons engaged in agricultural pursuits in the State. The number of farms cultivated by them increased 17.3 per cent between 1900 and 1910. As farmers, renting and owning land, they have complete charge of 5,083,552 acres; as farm laborers they undoubtedly cultivate a much larger area. Of the colored persons 10 years of age and over, 40.1 per cent are illiterate, and 27.5 per cent of those 10 to 14 years of age are

A. CONSOLIDATED SCHOOL AT FIVE POINTS.

B. ANOTHER CONSOLIDATED SCHOOL IN ALABAMA.

MAY DAY CELEBRATION AT THE PIKE ROAD CONSOLIDATED SCHOOL, MONTGOMERY COUNTY.

This school has 30 acres of good agricultural land and is planning to erect a $16,000 home for its teachers.

A. THE NEW PIKE ROAD CONSOLIDATED SCHOOL, MONTGOMERY COUNTY.

B. THE AUTOMOBILE TRUCKS AT PIKE ROAD CONSOLIDATED SCHOOL.

illiterate. The death rate among the Negroes is nearly twice as high as among the white people. Such a degree of illiteracy and ill health is certain evidence of extensive waste of economic resources and human energy.[1]

No discussion of the Negro population would be complete without reference to the Negro exodus from Alabama in 1916 and 1917. This movement was due to a combination of causes, both social and economic, which are enumerated in Chapter I. The heaviest migration was from the "black belt" counties. In the bulletin on "Negro Migration in 1916–17," published by the United States Department of Labor, the statement is made that, "It is from these counties that Negroes have gone literally by the thousands. Some of them have lost 25 per cent or more of their total Negro population within the past 18 months."[2]

Both the white and the colored population of Alabama is largely rural, the percentage being 82.6 for the white and 82.8 for the Negroes. While it is probable that the Negro population is less rural in character than it was in 1910, due to the migration referred to above, the problem of educating the Negroes in Alabama is certainly a rural rather than an urban problem.

Public-school facilities.—Table 25 presents some salient facts concerning the public-school facilities for Negroes.

Table 25.—*Public school statistics.*[1]

	White.	Negro.
Children 7 to 21 years of age in 1918	454,478	315,327
Teachers' salaries in public schools in 1918	$3,682,314	474,749
Teachers' salaries per child 7 to 21	$8.10	$1.51
Number of illiterates 10 to 20 years of age	23,451	64,746
Per cent illiterates 10 to 20 years of age	7.0	28.6
Number of teachers	9,050	2,716
Enrollment	375,824	190,250
Pupils enrolled per teacher	41.5	70

[1] Figures are taken from the 1918 report of the department of education.

The public-school teachers of Alabama received $4,157,063 in the school year ending September 30, 1918. Of this sum, $3,682,314 was for the teachers of 454,478 white children and $474,749 for the teachers of 315,327 colored children. On a per capita basis this is $8.10 for each white child of school age and $1.51 for each colored child.[3]

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[1] This statement is taken from Bulletin of the Bureau of Education, 1916, No. 39, p. 27. The figures are those of the census of 1910.

[2] P. 56.

[3] These averages were computed by dividing the appropriation for teachers' salaries in public schools by the number of children 7 to 21 years of age enumerated by the State biennial census in 1918. The salaries were obtained from the report of the State department of education, 1918, p. 166, and the school population from p. 155. City systems are included.

It is shown in the Alabama chapter of the publication "Negro Education," bulletin of the United States Bureau of Education, 1916, No. 39, that "The inequalities are greatest in the counties with the largest proportion of Negroes. The per capita sums decrease for white and increase for colored children with considerable regularity as the proportion of Negroes becomes smaller." The statement is also made that "The high per capita cost for white children in the 'black belt' counties is partly explained by the fact that they are few in number and widely scattered. The smaller cost of schools for colored children is partly due to the lower wage scale of colored teachers and partly to the very limited provision for high-school education. It is apparent, however, that these explanations by no means account for the wide divergencies in the 'black belt' counties."

In addition to the $3,682,314 appropriated for the public-school teachers of white children, the State appropriated $346,345 to maintain 42 county high schools, 9 district agricultural schools, 6 normal schools, and 3 institutions of higher learning. To the $474,749 for the public-school teachers of colored children the State added $16,000 to maintain one normal school, $4,000 for the agricultural and mechanical school, largely maintained by Federal funds, and $4,000 for Tuskegee Institute, a total of $24,000.

The large variations in the per capita expenditures on white and colored children in the several counties of Alabama are due to a large extent to the fact that the State school fund for public elementary schools is apportioned to the counties on the basis of the total number of children of school age, regardless of race, but the "apportionment" of the county's share of the fund in the county is left to the county board of education. The division of the fund between white and colored schools is, therefore, a matter wholly in the discretion of the county board. The black-belt counties draw very large sums from the State, in proportion to the number of white children in these counties, while other counties, which have comparatively small Negro populations, receive apportionments almost directly proportional to the number of white children of school age. The county boards use their authority in such a way that there are great discrepancies in some of the counties between the amounts spent on the white and colored children. There are also great discrepancies between the amounts on white children in the various counties. Table 26 shows the per capita expenditures for white and colored children in counties located in the various sections of the State.

TABLE 26.—*Per capita expenditures for white and colored children.*

Sections and counties.	Per capita expenditure.	
	White.	Negro.
The black belt:		
Bullock	$20.69	$2.48
Montgomery	15.00	1.46
Dallas	17.35	.90
The mountain section:		
Cleburne	3.68	2.56
Jackson	3.20	1.22
Blount	3.93	3.03
The Tennessee Valley:		
Colbert	6.44	2.11
Madison	7.23	1.86
Lauderdale	5.26	1.12
The hill section:		
Tallapoosa	7.11	1.51
Bibb	7.49	2.47
Tuscaloosa	7.71	2.48
The wire grass or piney woods section:		
Covington	6.72	2.14
Escambia	7.70	1.37
Dale	6.15	.99

Local tax has been levied in a number of counties, and this has enabled the " white " counties to increase their school fund and lesson the disparity between the " white " counties and the " black belt " counties, as far as the expenditure on white children is concerned. The division of local tax funds within a county is a matter of interest to that county only, but when a county receives funds from the State for the education of Negro children, and uses that money for the education of white children, the matter is one of State interest. Of the total amount disbursed during the school year ending September, 1918, for teachers' salaries, 89 per cent was paid to white teachers. Obviously, however, there is a large variation in the per capita expenditures on white children in the several counties. In other words, while most of the money is spent on white schools, there is little uniformity in the spending of it in the counties.

One of the stock explanations of the poor school facilities for Negro children, especially in the black belt counties, is that the " Negroes do not pay any taxes," and hence the county can not afford, as a matter of justice to the white people, to spend more than a small fraction of the school fund on Negro schools. Some of the counties that show the largest expenditures for white children and the smallest for colored would be placed in a bad situation if their own argument were applied to them by the State. This is very clearly shown by Table 27, which sets forth the amount by which the money received from the State treasury for school purposes exceeds that paid in, for 10 black-belt counties. These 10 counties are among the first 12 of those receiving from the State the greatest excess from the State treasury over the amount paid in. The figure following the county denotes its standing in this respect.

TABLE 27.—*Excess received from State treasury over amount paid in, for 10 black-belt counties.*

County.	Rank.	Excess received.	County.	Rank.	Excess received.
Bullock	1	$20,926	Butler	8	$18,871
Wilcox	2	19,326	Barbour	9	18,544
Pickens	4	19,589	Hale	10	18,976
Chambers	5	19,067	Clarke	11	18,014
Perry	6	19,064	Monroe	12	17,019

The per capita expenditures for white children in these counties is high as compared with most of the other counties in the State outside the black belt. The map also shows that the per capita expenditures for white children are large in the counties named in the table, as compared with the per capita expenditures for colored children in those counties. It might be added that six of the eight counties in the State which had not levied the 3-mill local tax when the 1918 report of the department of education was issued are black belt counties, and two of them are included in the above table.

According to the census of 1910 the total number of Negro illiterate males of voting age was 92,744, forming 43.4 per cent of the total. The white illiterates of the same age group were 30,633 in number, or 10.6 per cent of the total. For several years the Alabama Illiteracy Commission has been working to banish illiteracy from the State. Due to lack of funds, the commission has not been able to do more than make a beginning in the work for colored people. The number of illiterates 10 to 20 years of age, inclusive, was published in the report of the department of education in 1918. The figures on illiteracy in the same age group were published by the census in 1910, and these figures may be compared with the State figures. The census did not report the illiteracy figures by races, in the case of persons 10 to 20 years of age, inclusive. According to the 1910 census there were 526,505 persons 10 to 20 years of age in Alabama, of whom 86,437, or 16.4 per cent, were illiterate. According to the 1918 report of the department of education, the total number of persons 10 to 20 years of age was 561,291, of whom 88,197 were illiterate. The percentage of illiteracy was 15.7. The decrease in illiteracy was, therefore, only 0.7 per cent. At the present time the public school facilities for Negroes in Alabama are so inadequate that no great reduction in Negro illiteracy can be expected in the near future. But substantial progress is being made, as a result of increased interest on the part of county boards and superintendents, money raised by patrons to increase teachers' salaries and lengthen terms, and by Jeanes industrial supervisors, and the building of county training schools and Rosenwald schools. The factors making the fight against illiteracy a difficult one are short terms, the lack of good schoolhouses and equipment, and failure to enforce the compulsory education law against Negroes in some counties.

Schoolhouses and grounds.—Less than half of the buildings in which Negro children are taught are owned by the public. According to the 1918 report of the State superintendent, the ownership of the Negro school buildings is as follows:

TABLE 28.—*Ownership of Negro schoolhouses.*

	State.	County.	District.	Privately owned.	Cities.
Rural	151	65	598	1,040	....
City	....	....	....	5	53
State	151	65	598	1,045	53

Of the 1,854 rural schools, 1,040, or 65.1 per cent, are privately owned. Of the 4,584 white rural schools, 3,568, or 77.8 per cent, are owned by the State, the county, or the district.

The fact that such a large percentage of Negro school buildings are privately owned explains in part the poor condition of many buildings and their unsuitableness for school purposes. While not all the privately owned buildings are churches and lodge halls, it is quite a common thing to find a Negro school taught in a church. For instance, in Montgomery County 33 of the 69 rural schools are taught in schoolhouses, and 36 are taught in churches. In Dallas County half of the Negro schools are taught in churches. Efficient work can not be done in a school housed in a church or lodge hall. In the case of the church school, the seating is very unsatisfactory, as the church benches are used, and the children have no desks to work on. As in the case of the lodge hall, the lighting is unsatisfactory, as the windows are not properly placed for school purposes. In church and lodge hall schools the blackboard facilities leave much to be desired. Often no blackboard whatever is provided. The blackboard in the church school generally consists of several strips of painted wood fastened to two uprights and leaned against the wall. A number of lodge hall schools visited were equipped with patent or home-made desks, but the teachers reported that after lodge meetings it was usually necessary to rearrange the furniture and clean up the room.

The Negro schoolhouses, even when owned by the public authorities, are often without proper seating facilities. Public-owned schoolhouses were found with crude benches used as seats, even poorer than the pews used in many church schools. The State superintendent reports that out of 1,859 rural schools for Negroes, only 229 have patent desks. Of the 4,584 white schools, 2,790, or 60.9 per cent, are equipped with patent desks. The corresponding figure for the Negro schools is 12.3 per cent.

Very few rural schools for Negroes, with the exception of the Rosenwald schools, are properly lighted. In most of the schools visited the lighting was from both sides, and in many schools the position of one window was such as to throw the light directly into the eyes of the pupils. The prevailing style of building used exclusively for school purposes is the "box-car" type, with the door in one end, two or three windows on each side, and one or two windows in the other end toward which the pupils face. This type of school building is often found on the grounds of a church. The Negroes have built these schools in recognition of the fact that a church is not suitable for a schoolhouse. As the buildings were erected on private grounds, State aid was not secured, and the buildings were not erected in accordance with any approved plan. This statement also applies to those buildings erected as a combination lodge hall and school, with the schoolroom on the first floor. The practice of building schools of this type has been practically discontinued. The Negroes are now anxious to secure aid from the State and the Rosenwald Fund, and in order to secure such aid, the building must be erected on a plat of at least 2 acres owned by the public authorities and the building must be built in accordance with a plan approved by the State department or by Tuskegee Institute.

The school grounds are almost universally too small. Practically all the schools visited had grounds of 2 acres or less, except in the case of two-teacher schools built with State aid, which, according to law, must be built on a plat of 3 acres or more. The schools on church grounds have one advantage—the playground is generally ample in size, though not always level enough to be used as a playground. Very few schools used their grounds for gardening or agricultural experiments, but this is due in part to the shortness of the term. Playground apparatus of any kind was lacking in the rural schools visited, except in the case of some Jefferson County schools aided by corporations. The most common source of water supply is a well on the premises of a family living near the school. The schools taught in churches or in buildings on church grounds are the schools that generally have a well on the grounds. However, these wells are not used regularly during a large part of the year, and where they are surface wells, as in the case in Bullock County, the wisdom of using them for school purposes is questionable. Springs are not an unusual source of water supply for the schools. In nearly every school visited where a spring was used, it was not on the grounds.

While the spring is often inconveniently located, it is a safer source of water supply than the well on school grounds, judging by the schools visited.

In most of the schools visited the water was kept in open buckets. The drinking fountain was found in very few schools, usually in Rosenwald schools, but its use is on the increase. In Colbert County the county superintendent's insistence on the use of coolers in the schools has resulted in closed receptacles being provided in all the schools visited. The colored teachers deserve to be commended for their persistence in seeing that the pupils use individual cups. The extent to which individual cups are used in the Negro schools is surprising. The teachers have insisted on the use of the collapsible aluminum cup, but when these have not been secured or are left at home, the use of paper cups is required. Several schools were found where all the children had drinking cups which were kept at the school—all on a shelf provided for the purpose. On account of the great variety of glasses and cups, it was easy for each child to distinguish his own.

The heater found in nearly every school visited was the unjacketed stove. Outside of Jefferson County the jacketed stove was not found except in some of the Rosenwald schools. Wood is used as fuel far more than coal, outside of the counties where coal is at hand. The common manner of keeping the wood is to pile it in one corner of the schoolhouse.

The average colored rural school is sadly deficient in toilet facilities. Many outhouses were found in such a dilapidated condition that they could hardly be called toilets. When there is only one outhouse, as was the case at a fourth of the schools visited, the boys are expected to "use the woods." All the schools visited in Colbert County were equipped with two outhouses, as a result of the superintendent's refusal to recognize any school not so equipped. The Rosenwald schools are all supplied with two modern toilets.

It is only fair to say that most of the teachers whose schools were visited, especially those teaching in Rosenwald schools and in buildings built for school purposes, were making an honest effort to keep the building clean. Often this effort is made under very adverse conditions. The teacher usually sweeps the building out after school, or has some of the children do it under her direction. The monitor system is the one generally used. It is also customary to have several pupils sweep the schoolhouse out during the noon recess. The sprinkling process is not employed as regularly as could be wished, in connection with the daily sweeping. According to the teachers' statements, the floors are scrubbed at least once a term, and sometimes twice a month. The condition of the floors bore out the truth of their statements.

The Rosenwald schools.—The Rosenwald schools furnish a striking illustration of what can be accomplished by the cooperation of private philanthropy, public school funds, and the Negroes themselves. Mr. Julius Rosenwald, of Chicago, aids Negro communities in building rural schools. The funds are administered by the extension department of Tuskegee Institute. The amount given is limited to $400 for a one-teacher school and $500 for a two-teacher school. An equal or greater amount must be secured from the public authorities or raised by the school patrons. In many instances the Negroes have secured aid from both the State and the Rosenwald Fund in building a school.

To secure Rosenwald aid, the school must have at least a five months' term. No help can be secured from the Rosenwald Fund until the total amount raised, including the Rosenwald money, is sufficient to complete and furnish the schoolhouse, but land, labor, and material may be included in estimating the amount raised by the community. The plans for the building must be approved by Tuskegee Institute, and where State aid is secured, by the State department of education. The building must be completed within six months after the Rosenwald aid is secured.

Jeanes industrial supervisors, county agricultural agents, and teachers have been most successful in raising funds. The colored people deserve the highest commendation for the liberal way in which they have donated money for schoolhouses. The Rosenwald Fund has an agent who travels over the State, promoting the building of modern schoolhouses.

School consolidation has been promoted by reason of the fact that two communities, by combining their schools, can get $800 for the consolidated school if they raise a like amount. Terms have also been lengthened and teachers' salaries increased. The Rosenwald Fund aids communities that have erected new schools in this way: In the case of a one-teacher school with a five months' term, the Rosenwald Fund offers $30 if the patrons raise a like amount, in order that the school may have a seven-months' term. The term of a two-teacher school is increased one month by the same plan. Where the school already has a seven months' term, the money from the patrons and the Rosenwald Fund is used to increase the teacher's salary.

The Rosenwald schoolhouses are carefully planned to meet the needs of a rural school. In the case of a one-teacher school, the building is provided with a room for industrial work, cloak rooms, and a closet for storing supplies. The two-teacher schoolhouses usually have rooms for kitchen and shop, and a small library. The buildings are properly lighted, and equipped with patent desks and good blackboards. Each school has two sanitary toilets.

To aid in the building of 191 schoolhouses in Alabama, Mr. Rosenwald has given $64,250; the public funds invested in these schools amount to $49,741; the Negroes have contributed $101,460, and white people $8,645. Schools have been built in 24 counties. The counties in which the largest number of schools have been built are Russell and Macon, 15 each; Lee, 14; Lowndes, 13; Chambers, 11; Conecuh and Hale, 10 each.

School enrollment and attendance.—The following tables compare enrollment and attendance for the white and colored schools:

TABLE 29.—*Population and enrollment.*

Population 7 to 21 years of age:	
White	454,478
Negro	315,327
Enrolled:	
White	375,824
Negro	190,250
Per cent enrolled:	
White	83
Negro	60

TABLE 30.—*Enrollment and attendance.*

Class.	Enrolled.		Average attendance.		Per cent of attendance.			
					Of enrolled.		Of population.	
	White.	Negro	White.	Negro.	White.	Negro.	White.	Negro.
Rural	317,436	161,881	192,608	85,346	60.7	52.7		
City	58,388	28,369	42,785	17,050	73.3	60.1		
State	375,824	190,250	235,393	102,398	62.6	53.8	51.8	32.5

In his annual report for 1918, the State superintendent points out that the increase in enrollment for 1917–18 over the preceding year was 27,597 in the case of the white schools, due to the enrollment of 26,225 new pupils in the elementary schools and 1,372 new pupils in the high schools. In discussing the Negro enrollment, he says:

> The enrollment of Negro children for 1917–18 was 190,250, an increase of 33,521. This increase is accounted for by the fact that 33,474 new pupils entered the elementary schools during the year, while the high-school grades sustained a net gain of 47. The percentage of the Negro school population enrolled was approximately 60, as compared with 47 for the preceding year. This increase is one of the most remarkable facts recorded in this report.

From these figures, it is apparent that while the actual number of new children in the Negro schools exceeded that of the white, the increase in the case of high-school pupils is negligible, as compared with the corresponding figure for the whites.

After making due allowance for the number of children of school age who are in school, but not included in the above figures, the State superintendent concludes that at least 12 per cent of the white and

25 per cent of the Negro school population were not in school for a day during the year. He attributes the relatively large increase in enrollment to the compulsory attendance law which became effective October 1, 1917.

The figures for increase in average attendance are striking when compared with those for enrollment. The increase in white attendance was 15,359 over the preceding year, an increase of 7 per cent. The increase in the case of the Negroes was only 5,014, or 5 per cent over the preceding year. Due to war conditions there was an actual decrease in the average attendance of Negro high-school pupils. While the increase in enrollment for the Negroes exceeded that of the white by 5,924, the increase in average attendance for the whites exceeded that of the Negroes by 10,345.

What are the causes of poor attendance in Negro schools? One important cause is the fact that Negro children are kept out of school by their parents to help on the farms. Even when the school term is only five months, as in the case of Montgomery County, which has a school term of 100 days for colored schools, many of the children enter late and many are taken out of school as soon as the spring planting begins. In counties with a five months' term the term generally ends the middle of April. There are, however, a number of other causes of poor attendance. It has already been shown in the discussion of school buildings and grounds that too often the school is not an attractive place. If the school is taught in a church or lodge hall the absence of blackboard facilities and suitable desks interferes seriously with the work of the pupils, to say nothing of the poor lighting and other objectionable features. Even when the school is taught in a building erected for school purposes, properly lighted, and equipped with modern desks and blackboards, the lack of globes, charts, maps, library books, and other equipment lessens the efficiency of the teacher's work. The result of this lack of equipment is that the so-called teaching process too often becomes a mere "hearing of lessons," the pupils reading from the book and reciting what they have memorized from it.

Another cause of irregular attendance that might be mentioned is the small attention given the individual child, due to there being too many pupils to the teacher.

TABLE 31.—*Number of pupils to the teacher in the rural districts and cities, for both races.*

Classes.	Enrolled.		Teachers.		Pupils per teacher.	
	White.	Negro.	White.	Negro.	White.	Negro.
Rural	317,436	161,881	7,562	2,271	42	71.3
City	58,388	28,369	1,488	445	39.2	63.8
State	375,824	190,250	9,050	2,716	41.5	70

In most of the Negro schools there are entirely too many pupils to the teacher. The result is that the average pupil gets scant attention, and his interest in school work lags accordingly. Sometimes the parents or public authorities employ an assistant teacher during the months when the attendance is best. Whereas the State has 2,716 teachers, the rural school agent in charge of Negro schools for the department of education estimates in his 1918 report that 8,000 teachers would be needed to properly handle the elementary pupils if all attended regularly.[1] This estimate seems excessive, but assuming that three-fifths of the Negroes of school age are of elementary grade, 4,729 teachers are needed on the basis of 1 teacher to 40 pupils. The number of pupils enrolled per teacher varies greatly in the counties. Table 32 shows how great this variation is, for nine counties.

TABLE 32.—*Colored pupils per teacher in certain counties.*

Counties.	Colored pupils enrolled.	Colored teachers.	Pupils per teacher.
Autauga	1,677	34	49.3
Bullock	4,150	45	92.2
Coffee	1,137	27	42.1
Conecuh	2,935	41	71.6
Madison	3,919	61	64.2
Marengo	3,353	49	68.4
Montgomery	9,970	142	70.2
Shelby	1,354	29	46.7
Walker	1,740	38	45.8

Another cause of irregular attendance is poor teaching. It is impossible to secure well-trained teachers with forceful personalities for the salaries that are paid. The saying that "the teacher makes the school" applies with as much force to the colored school as it does to the white school. In order to teach Negro children effectively, the subject matter should be presented in a concrete way, so that the child can visualize the ideas in the lesson. A poorly trained teacher will not use such methods in the classroom. The work in the classroom is not now related to the child's daily life as it should be, and hence not adapted to his needs. More emphasis should be put on handwork and the application of the knowledge gained.

The responsibility for poor attendance, however, does not rest entirely with the public school authorities. The parents do not seem to realize the importance of regular attendance. Even in cities, where the parents do not rely on the children's help as they do in the country, the attendance is far from being what it should be. As might be expected, however, the attendance is better in cities than in the rural districts.

The teachers could improve the appearance of the school buildings and grounds by putting forth a little effort in the right direction.

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[1] Report of Department of Education, 1918, p. 101.

It would certainly seem that the teachers could at least secure attractive pictures for the schoolroom. At a number of the schools visited the teacher had secured the help of the patrons and cleared off the school grounds, provided window shades, and made other improvements.

The following table shows just what the actual attendance was at 20 rural schools in Montgomery County.

TABLE 33.—*Attendance of Negro children in 20 schools, Montgomery County.*

Attended:	Number of children.
1–10 days	50
11–15 days	28
16–20 days	32
21–25 days	18
26–30 days	50
31–35 days	56
36–40 days	66
41–45 days	54
46–50 days	57
51–55 days	58
56–60 days	111
61–65 days	97
66–70 days	72
71–75 days	48
76–80 days	138
81–85 days	140
86–90 days	106
91–95 days	121
96–100 days	111
Total	1,413

Of Negro children enrolled 41 per cent attended less than 60 days.

As a result of irregular attendance and other factors closely related to it, Negro children leave school before getting very far in the grades. The following tables for rural schools and for places of less than 2,000 inhabitants show this condition. These figures were gathered by means of a questionnaire mailed to the teachers.

TABLE 34.—*Distribution, by grades, of Negro pupils.*

Grade.	Rural schools.		Towns with less than 2,000 inhabitants.	
	Number of children in the grade.	Per cent of total.	Number in the grade.	Per cent of total.
1	19,465	42.2	6,762	37.5
2	8,697	18.9	2,899	16.1
3	6,414	13.9	2,356	13.1
4	5,485	11.9	2,163	12.0
5	3,305	7.2	1,560	8.7
6	1,710	3.7	1,167	6.5
7	600	1.3	674	3.7
8	412	.9	434	2.4
Total	46,079	100.0	18,015	100.0

Teachers and county supervision.—A large number of the public-school teachers of Alabama received their training in private institutions. Can the public and private institutions combined meet the demand? In this connection the following paragraphs from Bulletin 39, 1916, United States Bureau of Education, are illuminating. The statements are based on a thorough study of the private schools for Negroes in Alabama.

Private financial aid.—The deficiencies in public expenditures for the education of the colored people largely explain the active campaigns for private schools since the Civil War. As a result of this activity, the private schools have a property valuation of $5,457,375, and annual income of $554,556, and an attendance of 12,819 pupils, of whom over five-sixths are in elementary grades. It is sometimes thought that the liberal private contributions to these schools make up for the inequalities in the public appropriations for the education of white and colored youth. The total sum appropriated for teachers' salaries in colored public schools in Alabama, however, together with the income of all colored private schools, aggregate $926,733, or about a million and a half dollars less than the expenditure for teachers' salaries in white public schools alone. In addition, there are 50 white private schools which report to the State superintendent of education. The aggregate expenditure of these schools is practically equal to the expenditure for colored private schools.

Teacher training.—The most urgent need of the colored schools in Alabama is trained teachers. The supply now depends almost entirely upon the secondary schools, most of which are private institutions. Of these only seven offer fairly adequate courses in teacher training. Eleven others include one or two teacher-training subjects in their general course. To supplement these facilities, an effort has been made to develop county training schools. Through the cooperation of the Slater Fund and the General Education Board with the State department of education, four of these schools are now maintained. As yet, however, their work is almost entirely of elementary character. They are county centers at which some secondary and industrial training may be supplied to those who plan to teach in the rural schools. The pupils in the graduating classes of all the schools offering teacher-training subjects in 1915 numbered only 270, an annual output obviously inadequate to meet the need for teachers in a State with over 900,000 colored people and 2,350 colored public-school teachers, of whom 70 per cent are holding only third-grade certificates.

In the discussion of certification in Chapter XVIII it is shown that 70 per cent of the Negro teachers hold third-grade licenses. The white teachers are much better prepared for their work than the colored teachers, if the grade of license is taken as a basis of comparison. Several years ago a law was passed giving life certificates to all teachers who had held first-grade certificates for a certain time. Most of the colored teachers with first-grade certificates thereby secured life certificates, and since that time few colored teachers have qualified for first-grade certificates. This explains why there are more colored teachers holding life certificates than there are holding first-grade certificates.

TABLE 35.—*Salaries of white and colored teachers compared in cities and rural districts.*

Districts.	Total amount of teachers' salaries.		Number of teachers.		Average salary.	
	White.	Colored.	White.	Colored.	White.	Colored.
Rural	$2,618,167	$321,109	7,562	2,271	346.2	141.4
City	1,064,147	153,640	1,488	445	715.2	345.3
State	3,682,314	474,749	9,050	2,716	406.9	174.8

From this table it is apparent that the average salary paid the Negro rural teacher is too small to attract competent workers to that field. While the average salary of the city teacher is not large, it is more than twice that of the rural teacher. There can be no doubt that some of the money now spent on Negro schools is wasted, as far as educational results are concerned. The teacher that can be employed for $25 or $35 a month, for a term of from three to five months, is often not worth the salary paid. Obviously she must follow some other vocation for most of the year, in order to make a living. Where the teacher lives in the community, her salary is relatively larger by reason of the fact that she does not have to pay board. The board paid by teachers ranges from $8 to $15, and salaries have not begun to keep pace with the cost of board. In a number of counties it is customary for the patrons to pay the teacher's board, or part of it, as well as to "supplement" her salary so as to add a month to the public school term.

Five years ago the salaries paid to Negro teachers were much larger, relatively, than they are now. There are two reasons for this. The first is the rapid rise in the cost of living that has taken place. The second is the greatly increased economic opportunity that has come to the Negro. Five years ago the vocations open to Negroes were very limited, and most of them were the less desirable vocations, demanding long hours and disagreeable work for small pay. As a result of this condition, the positions in the public schools were very much sought after, and the best class of Negroes was found in the teaching profession. But to-day conditions are different. Vocations formerly closed to Negroes are now open, while in those which have always been open, the wage scale is much higher. The positions in the schools are, therefore, far less desirable now than formerly, as compared with other positions open to colored people. The Negro is no longer a stranger in northern industry. And the number of so-called "race enterprises" has greatly increased.

The result of this is that to-day a large percentage of the competent Negro men and women remain in the profession because of their interest in education and in their race. This is brought out in the questionnaires returned by the colored teachers. One question asked was: Do you expect to remain in the profession permanently? Why? Some of the replies are as follows:

"Because I like the work and I feel that I can be a help to my people"; "Love for humanity"; "I feel that I can help those less fortunate"; "I feel that my race needs all the help I can give"; "There is no better way than this to eliminate illiteracy and to help the race"; "Because I think I am able to help our race"; "To promote the general interest and welfare of the race"; "To help build up the race "; " To help boys and girls to live "; " Because I feel that I can help elevate humanity."

One factor which lessens the efficiency of the colored teachers is the lack of supervision. The counties in Alabama are large, and most of them have so many white rural schools that often the county superintendent has all that he can do to supervise the white schools. There is no doubt, however, that the Negro schools are receiving more supervision than ever before. Most of the county superintendents who have come into office under the 1915 county board law are interested in the education of all the people, and it is only the pressure of other demands that prevents them from giving more attention to the colored schools.

The 1918 report of the department of education showed that 4,117 visits to rural colored schools were made by the county superintendents and their assistants. Of the total number of visits made, 1,759 were in Jefferson County, 162 in Macon County, and 673 in Montgomery County, leaving only 1,523 for all the remaining 64 counties of the State. The showing for the State, as a whole, is largely due to the effective work of the industrial supervisors in 25 counties, maintained by the counties in cooperation with the Jeanes Fund, each paying about half of the worker's salary. The number of visits reported in the 1917 State report was 1,794, so that the increase for one year was 2,323, which shows remarkable progress in school supervision. The colored schools need all the supervision they can get, as many of the teachers have never had an opportunity to observe effective teaching, and 70 per cent of them are not well prepared for their work, judging by the grade of license held. Colored teachers are most responsive to supervision and very willing to carry out orders and act on suggestions.

As stated above, the supervision of colored schools is most effective in Jefferson, Montgomery, and Macon Counties. In Jefferson County two colored supervisors are employed, and the white supervising principals give the Negro schools the same attention that they do the white schools. In Montgomery County three colored supervisors are maintained with the help of the Jeanes Fund, and the General Education Board. The three colored supervisors in Macon County are financed by the county, the Jeanes Fund, and Tuskegee Institute.

For further information on the preparation of teachers the reader is referred to the chapter on that subject.

County training schools.—There are 11 of these institutions in Alabama. They are maintained by the county boards of education, with the aid of the Slater Fund. The conditions on which the Slater Fund aids the county school are as follows:

1. That the school property shall belong to the State or county, thus fixing the school as a part of the public-school system.

2. That there shall be an appropriation of at least $750 from the public funds for maintenance.

3. That the teaching shall be carried strictly and honestly through the eighth grade, including industrial work, and in the last year, some training, however elementary, for the work of teaching.

On these conditions the Slater fund appropriates $500 yearly for maintenance, and aids in supplying new buildings or making repairs the first year, when funds for the same purpose are provided from other sources.

Seventy-seven such schools are now in operation in as many counties in the South, and schoolmen are agreed that this type of school has come nearer than any other to meeting the needs of the rural Negroes. The purpose for which these schools were created was the training of teachers for a people 80 per cent rural. The idea was to supply the country schools with teachers who had been brought up in the country and who understood and sympathized with country life. A large percentage of the teachers from private schools are city bred, and before the development of the county training schools all the public institutions of secondary grade, except the State institutions, were located in cities. The city-bred teachers from the city high schools can hardly be expected to cope with the problems of the rural Negro. They may be good teachers, but only in exceptional cases have they been community leaders. In view of these facts, educators interested in the welfare of the Negro saw the necessity of training teachers in their own counties, thereby making it unnecessary for them to spend several years in a city in order to teach.

In Alabama the pupils in the county training schools are nearly all of elementary grade. During the school year 1917–18, 114 pupils of secondary grade were enrolled in the training schools. It is probable that this number would have been twice or three times as large had it not been for war conditions. It is too much to expect, however, that these schools should become county normal schools within the first four years of their existence.

The work of the county training schools has been conspicuous for two things—the thoroughness of the classroom work and the emphasis put on industrial work. The schools serve as a model for the county, and are an ever-present source of inspiration to the rural teachers. County institutes are generally held at the training school in the summer. All the counties with training schools have Jeanes industrial supervisors, and some have colored farm demonstrators. These workers usually make the school their headquarters. A teacher of vocational agriculture is maintained at each school without expense to the county, by cooperation of the State and Federal governments, under the Smith-Hughes Act.

These schools illustrate in a very striking way what can be accomplished by the cooperation of public authorities, northern philanthropy, the Negroes, and white people interested in developing schools adapted to the Negro's needs. The last report of the State department of education, referring to these schools, says that "Local white people have donated money, lumber, and land toward their erection." The Negroes themselves have given liberally for buildings, equipment, and maintenance.

The Lowndes County Training School is probably a typical training school in Alabama. It has 7 acres of land, 5 of which are used for garden and experimental plots, and the remaining 2 for playground. There are 3 buildings—the school building, teachers' home, and shop. The value of the buildings and equipment is $4,150. Much of the labor used in building the school was donated by the patrons, with a resultant saving in the initial cost. The buildings and equipment represent investment by the county board, the general education board, the Slater Fund, local white people, and Negroes. The school has five teachers, two men and three women. One man is principal and the other has charge of the shopwork and vocational agriculture. The class work is effective, and the work in the shop and garden is of immediate value to the pupils and their parents, and to the whole county. The girls are taught cooking and sewing. The pupils are drawn from a very large area, but the school will not be a real county institution until a dormitory is provided. The Negroes are now raising money to build one. The effect of the school on the community has been to make the people do more intelligent farming and improve their homes. White people hitherto indifferent to education for the Negro have become interested as a result of inspecting the school. The value of such an institution to both races is apparent to anyone who sees the work that is actually being done.

Jeanes industrial supervisors.—Reference has already been made to the supervising teachers whose work is made possible by the cooperation of the county boards and the Jeanes Fund. There are 31 of these teachers, working in 25 counties. The following quotation from Bulletin 38 (p. 165), 1916, United States Bureau of Education, is a concise description of the work done by these teachers:

> These are usually young colored women who visit the public schools of the counties for the purpose of aiding and encouraging the schools in all phases of their work. The more important service of these traveling teachers, working under the direction of the county superintendent, is to introduce into the small country schools simple home industries; to give talks and lessons on sanitation, personal cleanliness, etc.; to encourage the improvement of schoolhouses and school grounds; and to conduct gardening clubs and other kinds of clubs for the betterment of the school and the neighborhood.

The teachers are appointed by the county superintendent and their work is supervised by that officer. Effort is made by the representatives of the Jeanes Fund to have the county authorities and the colored people undertake as much as possible of the salary and expenses of these teachers.

According to the last published report of the Jeanes Foundation, made when there were only 24 Jeanes teachers in Alabama, the fund paid the teachers $5,223, and the public-school authorities, $3,805.

These "walking teachers," as the Negroes call them, were originally put in the field in order to vitalize the school work by relating it to the everyday life of the child. How well they have succeeded is attested by the superintendent of public instruction for Virginia, in his annual report for 1916–17. The Jeanes workers have been in Virginia longer than in any other State, and the value of their work is very evident there. The superintendent says:

COLORED SUPERVISORS AND THE LESSON THEY TEACH.

Some of life's best lessons are taught by the simplest and most obvious illustrations, as in the case of the sluggard who was advised to observe the unrecognized ant; and so we may say that if any man will observe work of the colored demonstrators, or supervising teachers—men and women whose services have been almost thrust upon the State by private generosity—he can not hesitate for a moment in deciding what is the next step in the development of our work among the white children. These colored leaders have increased teachers' salaries; they have also lengthened the term and have brought into the schools so many new children that the taxpayer has found the cost per capita materially reduced.

The work of the Jeanes teachers is made more effective by the cooperation of the General Education Board, which pays the salaries of the teachers in the summer, thereby making them all-year workers. After the schools are out the Jeanes teachers form Home-Makers Clubs and give demonstrations of canning, preserving, cooking, and proper care of the home. The figures for 1917, from the report of the Alabama department of education, give a fair idea of the extent of this work:

Number of clubs organized	582
Number of girls enrolled	6,774
Number of mothers enrolled	6,915
Total membership	13,689
Number of public demonstrations in canning	937
Number of homes visited	5,290
Number of quarts of fruits and vegetables saved for home use	461,787

The work of the Jeanes teachers is supervised by the county superintendents, and the funds with which they are paid are handled through the county superintendent's office.

Table 36 shows in detail the manner in which the Jeanes industrial supervisors are financed in the several counties, and the extent of their supervision and money raising.

TABLE 36.—*Work of Jeanes industrial teachers in Alabama in 1917–18.*[1]

Counties.	Jeanes fund.	County fund.	Schools visited.	Total number of visits.	Amount of money raised.
Autauga[2]	$150.00	$150.00	....	....	....
Baldwin	180.00	120.00	20	107	$829
Bullock[2]	150.00	150.00	....	....	....
Calhoun[2]	180.00	90.00	....	....	....
Colbert[2]	175.00	122.50	21	45	966
Chambers	150.00	150.00	41	80	1,100
Conecuh	150.00	150.00	36	131	700
Coosa	240.00	....	19	48	848
Coffee	175.00	175.00	25	111	1,454
Dallas	150.00	150.00	44	80	872
Greene[2]	180.00	105.00	....	....	....
Henry	192.50	122.50	24	120	580
Houston	180.00	106.00	18	108	889
Jefferson	270.00	270.00	40	127	966
Lowndes	350.00	....	28	62	814
			25	50	215
Lee	240.00	....	42	126	1,691
Macon	350.00	....	29	162	1,608
Madison	150.00	150.00	37	37	3,035
Mobile	200.00	200.00	38	173	487
Monroe	227.50	105.00	46	180	1,200
Montgomery[2]	240.00	240.00	....	....	....
Perry	195.00	105.00	40	126	450
Pickens	180.00	120.00	46	147	2,329
Randolph	150.00	150.00	30	210	3,466
Russell	175.00	175.00	47	248	4,563
Tallapoosa	245.00	105.00	44	153	2,082
Walker	140.00	210.00	20	224	900

[1] This table was furnished by the rural school agent who supervises the colored schools.
[2] Report for this county incomplete.

State supervision of schools.—Through the cooperation of the General Education Board a rural school agent connected with the State department of education, and working under the direction of the state superintendent of education, gives his entire time to supervising the Negro public schools of the State. The rural school agent is a white man of extended experience in school work, and he organizes and directs the colored workers in such a way that efficient work is done in all parts of the State. There is also a Jeanes teacher who is a State worker, supervising the other industrial teachers. Her salary and traveling expenses are met in part by the General Education Board. The State department finances two colored institute conductors, whose work has been of great value. The Alabama illiteracy commission has one colored field agent. The Negroes have raised a large part of the money used to keep this agent at work.

Work of State institutions.—Much of the progress that has been made in Negro education in Alabama is due to the work of three schools: Tuskegee Institute, the Agricultural and Mechanical College at Normal, and the State Normal School at Montgomery. The State appropriates $4,000 toward the maintenance of Tuskegee, a very small part of that institution's income, but enough to make the school a quasi-public institution. The Agricultural and Mechanical College at Normal receives most of its support from the Federal Government ($22,100). It also receives a State appropriation of $4,000. The Normal School at Montgomery receives a State appropriation of

$16,000. The influence of the founders of these institutions did much to create sentiment favoring Negro education, and to improve race relations and bring about a better understanding between the races. William H. Councill founded the Agricultural and Mechanical College at Normal, and donated the plant to the State when the institution was given the Morrill Fund and became the land-grant college for Negroes in Alabama. William B. Patterson established at Marion the normal school, which was later moved to Montgomery. The institution built by Booker T. Washington at Tuskegee has had a powerful influence in molding sentiment favorable to Negro education. All these educational leaders believed that education should be adapted to the needs of the people, and the courses given at their respective institutions have been formulated in accordance with that belief. The work of these schools has also been influential in destroying prejudice against vocational education for white people.

At present the State Normal School at Montgomery is without dormitories, so that students who come from out of the city are forced to board with families in the city. The school authorities are unable to exercise any supervision over the students after school hours. Parents are often unwilling to send their boys and girls off to school under these conditions. The result is that a very large part of the enrollment is from the city of Montgomery, and the city school board has not seen the necessity of building a high school for Negro children, when the State institution served the purpose. The school has only 5 acres, and its work is hampered by this fact. Due to its location in the city of Montgomery, and the fact that a large part of its student body is from the city, the atmosphere is not favorable to the training of rural leaders. At present the vocational courses for boys, with the exception of gardening, are not effective, and some of them have been discontinued. While the institution is not a trade school, these courses should be required of men who are preparing to teach, so that they may be prepared to make their teaching of real value to their pupils. The school has a very large elementary enrollment. These children are charged tuition, and while they are taught without expense to the State, there is no necessity for having an elementary school larger than is needed for practice teaching. The classroom work in the secondary classes is thorough. Despite the handicaps of the school many efficient teachers have been sent out to serve the State.

The Agricultural and Mechanical College at Normal has been hampered by limited funds. The Morrill fund which it receives from the Federal Government can be used only for certain purposes. To insure the efficient use of the Federal appropriation the school should have from other sources an income at least equal to the Federal fund. The State appropriation of $4,000 has not been increased since 1885, while the expenses of the school have increased until at present there is a debt of $30,000 accumulated during the last 15 years. For many years the school had an unusually strong faculty, but the salaries paid are no longer adequate to command the best type of teacher. The school now spends more for coal than the State appropriates annually for maintenance. The institution is sadly lacking in dormitory facilties. Teachers' homes and an academic building are also very much needed. The State has never given the school a building, nor made any special appropriation. However, the school has secured several buildings through the generosity of friends, but on account of the limited income the building program was discontinued, as the addition of new buildings increased the cost of upkeep. At present a chapel is in use that was condemned several years ago.

The emphasis at Normal has been on teacher training, trades, and agriculture. The school has 2,266 graduates. The first four vocations represented, ranked according to the number of graduates in them, are: Housekeepers, 498; teachers, including principals, and supervisors, 480; farmers, 340; trades, 302. While the academic work has not been neglected, the work of the graduates shows that the purposes for which the school was founded have been kept in mind by the president and teachers.

The school has never interfered with the development of the public school in Huntsville. Its students have been drawn from all parts of the State, especially from the Tennessee Valley. It is evident, however, that if the school is to serve the State properly, either as a trade school, an agricultural school, or a normal school, it must be better supported by the State.

The work of Tuskegee Institute is so well known that it would seem unnecessary to give an extended account of it here. It should be borne in mind, however, that while Tuskegee receives an appropriation from the State equal to that of the Agricultural and Mechanical College and has done a magnificent work in the State, it is really an institution for South Carolina, Georgia, and the Gulf States, just as Hampton Institute is for the States farther north. In other words, its field is much larger than the State of Alabama. Nevertheless, Tuskegee is now regarded as the educational headquarters for the colored race in Alabama. Probably the most remarkable and far-reaching service rendered by Tuskegee has been its extension work. The following quotation from Bulletin 39, 1916, United States Bureau of Education, gives a brief account of Tuskegee's extension work:

> The extension department provides a large number of activities for the improvement of the educational, agricultural, business, home, health, and religious life of the colored people of the United States. These activities vary from

those limited to the needs of the institute community to those of national significance. The local organizations include the building and loan association, home building society, women's clubs, health and religious organizations. In Tuskegee town a night school is maintained and other activities are carried on for the improvement of the colored people. County-wide movements include the supervision and building of rural schools, farms demonstration work, and health campaigns. The State-wide and national activities are largely the result of Dr. Washington's influence over the colored people and the esteem with which he was regarded by white people North and South. The most important of these are the National Business League, with its State and local organizations, and the State educational tours which Dr. Washington conducted in almost every Southern State.

Probably the most influential of the extension efforts is the Negro Farmers' Conference held annually at the institute. This conference brings together thousands of colored farmers from neighboring counties and hundreds from other parts of the State and neighboring States. In addition, many influential white and colored people from every part of the county have gone to Tuskegee to see the assembly guided by Dr. Washington. On the following day the large meeting, a "workers' conference," is held. This is composed of persons who are directing all forms of endeavor for the improvement of the Negro race. Closely connected with this farmers' conference are the farmers' institute and short course in agriculture. The farmers' institute is a monthly experience meeting of local farmers, with simple talks on improved methods by Tuskegee teachers. The short course, consisting of two weeks of study and observation at the institute, is widely attended by farmers of surrounding counties during the idle seasons on the farm.

The experiment farm established at Tuskegee in 1896 by the State legislature in conducting experiments in soil cultivation for the benefit of the colored farmers of the State.

The school publications include three regular papers and many valuable pamphlets. The Tuskegee Student is a bimonthly devoted to the interests of the pupils, teachers, and graduates. The Souther Letter, a record of the graduates and former pupils, is issued monthly and sent to persons interested in Tuskegee. The Negro Farmer and Messenger is a monthly paper devoted to the agricultural and educational interests of the colored race. The Negro Year Book is a compendium of valuable facts concerning the Negro in the United States.

The summer school, with a one-month's session, was attended in 1915 by 437 persons who had been teaching in every section of Alabama and in many neighboring States. The course includes review of elementary school subjects, industrial training, methods, observation, and practice teaching. About 40 teachers were employed.

Summer schools for Negroes.—The summer schools have played a very important part in improving the work of teachers in service. The colored teachers deserve to be commended on their attendance at summer schools. All the teachers interviewed at the schools visited had attended summer schools, with the exception of those teaching their first term, and they expressed an intention to attend some institution during the summer. It is not possible to mention all the schools that have served the State by providing summer schools for teachers, but in addition to Tuskegee Institute, the State Normal

School and the Agricultural and Mechanical College, the institutions that are especially deserving of mention for their good work along this line are Miles Memorial College, at Birmingham; Talladega College, at Talladega; and Selma University, at Selma.

Importance of training for Negro and type of education needed.—In the development of a State it is obvious that a group of people forming over 40 per cent of the total population can not be disregarded. From the standpoint of health alone the white population of Alabama must be concerned about the Negro and his welfare. There are economic considerations, however, that would seem to be convincing in themselves. As a result of the boll weevil's inroads, a new type of farming has been developed in Alabama, and the process is a continuing one. The old "cotton farming" has given way to the raising of diversified crops and stock. The new farming does not require as much labor as the old, but it requires more intelligent labor. The ignorant Negro "hand" that served the planter's purpose when cotton was king is hardly competent to handle farm machinery and take care of stock. The problem of the modern farmer is not the supply of labor, but the supply of efficient labor. The readjustment period between the cotton farming and the new crops threw thousands of Negroes out of work, as is shown by the following paragraphs from the Alabama chapter on "Negro Migration in 1916–17," published by the United States Department of Labor.

> A great majority of the Negroes have been wholly dependent for their subsistence on the owners or overseers of the land. The Negro tenants have always been accustomed and have, therefore, always expected to have provisions advanced to them through many months of the year. This was done either by the landowner, overseers, or by the merchants. To use the common expression, they expected to be "carried" while the crop of cotton was being made. When an average crop was made the result was satisfying both to the landowner and to the Negro cropper or renter. But the evil effects of this system have been felt most severely during the past four years. For many reasons the system has proved economically unsound.
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> In the first place, it was profitable only for extensive farming, and the fertility of the land has been constantly lessened. Neither the absentee farmer nor the Negro tenant, who was at best attached in only a temporary way to the land which he cultivated, was vitally interested in the improvement of the soil. As a consequence, some of the most fertile lands have become unproductive through poor cultivation and the continued planting of a single crop.
>
> Again, the methods of conducting business under this system, by both the white landowners and the Negro tenants, have been unscientific. Partly because of the improvident habits of the Negroes and their frequent disregard of the binding importance of contracts many landowners have not been accustomed to keep strict accounts or to make strict settlements with their Negro tenants. The system was also conducive to idleness. The Negroes were fully and profitably employed during the cotton planting and picking seasons, but

went without employment during the other months. Diversified farming requires labor in every month of the year, but in the cultivation of cotton the Negro could spend certain months away from the farm if he chose.

Thus as a farmer the Negro has known how to raise only one crop and that under definitely prescribed conditions. Planters and Negro tenants alike stood powerless before the conditions arising from the coming of the boll weevil. One of the effects of the weevil has been greatly to reduce the cotton acreage and to alter the methods of planting and cultivating it. It is not unnatural that the Negroes accepted these facts slowly. Economic pressure alone forced a reduction in the cotton acreage. They have never been skilled in stock raising, the growing of grain crops, peanuts, and forage crops. They have yet to learn how to prepare the soil for grain crops, how to plant and cultivate them, and how to harvest them. Everywhere in the black belt the remark was heard that the Negro renter "likes to plant cotton." He is skeptical of corn, velvet beans, peanuts, and hay.

For both landowners and tenants the period of transition in farming during the past two or three years has been one of great uncertainty, instability, and unrest. The period was preceded and attended by two other unfortunate conditions which brought financial ruin to many planters, merchants, tenants, etc. One of these was the low price of cotton and the other was the inability to borrow money at a reasonable rate of interest. "The exodus," said one of the most successful business men of the State, "originated in the low prices paid for cotton in 1913 and 1914. The farmers have not been prosperous; they have been exceedingly unprosperous. The present conditions grew out of the failure of a paying crop."

One of the underlying causes of the migration, therefore, may be characterized as the changed conditions incident to the transition from the old system of cotton planting to stock raising and the diversification of crops.

Where will the farmer look for this type of labor? Obviously the development of it on the farm itself will prove expensive, because machinery and stock represent too much capital to be experimented with. And the ability to handle farm machinery and tend high-grade stock presupposes a certain amount of "schooling." The question is not, what will the farmer have to pay for such labor? but where will he find it? Cheap labor often proves the most expensive in the end, because of the damage to farm land and equipment. Apparently the county training schools are best adapted to meet this need. It has been shown that these schools give the boys a good common-school education, with training in vocational agriculture and in the rudiments of carpentry and blacksmithing. The agricultural future of Alabama is dependent on a supply of efficient labor.

The influence of good schools in keeping the Negroes satisfied, and preventing them from migrating to other States, should be mentioned in this connection. Instances were found where Negroes had left one county in the State to go to an adjoining county, due to the attraction of superior school facilities. The holding power of a good school is commented on in the bulletin on Negro Migration published by the Department of Labor:

Though Negroes may go from a section in large numbers, as from Lowndes County, Ala., for example, which was severly affected by the boll weevil and the floods, yet few, if any, usually leave the neighborhood of a good school in such a locality. About the Calhoun colored school in Lowndes County, Ala., there are perhaps a hundred Negro farmers, who, through the instrumentality of the school, have been able to buy and pay for their lands. Not one of these men has been attracted away by the opportunities in the North; and other Negroes in this neighborhood, though living under hard conditions on great plantations, declare that they remain on account of the good school for their children. A number of other similar illustrations could be given.

While Alabama is primarily an agricultural State, it is wonderfully rich in mineral resources, notably coal and iron. An extensive industrial development seems to be inevitable. But here again a supply of skilled labor will be necessary, and in industry the labor will have to be even more skilled than on the farm. Carpenters, machinists, blacksmiths, and men skilled in various trades will be essential if Alabama is to develop her natural resources and become a great industrial center. Forty trades are taught at Tuskegee and twelve at the agricultural and mechanical school, but these two schools can not meet the present demand for skilled workers. Schools like the Industrial High School in Birmingham will help to meet this need, but at present the Birmingham school is the only one of its kind in the State. Unless the State makes an effort to supply the demand the problem will be left to a chance solution.

The fact that a good school is a commercial asset has been recognized by the industrial corporations in the Birmingham district. Some of them have pushed the development of public schools until the labor turnover has ceased to be a serious problem. In Jefferson County it is customary for the companies to supplement the pay of the public-school teachers and at a number of schools visited the teachers were receiving as much from the company as the county paid them. A number of the school houses inspected in Jefferson County were built by corporations especially for the children of their employees.

Fear has been expressed in some quarters that the teaching of trades to Negroes will bring the race into economic competition with white men and that this may cause trouble. Unless the industrial development of the State is to be retarded, however, there will be so much skilled work to do that the possibility of Negro workmen interfering with the opportunities of white workmen will be small indeed. For some years Negroes have been receiving trade-training, and have followed their trades in Alabama, and yet no industrial clashes between the races have occurred. Such troubles have been confined to the North, where conditions are very different. At the present time the State is making very little effort to teach trades to white boys, and it would seem that some supply of skilled mechanics should be provided. Otherwise it will be necessary to bring in tradesmen from outside the State. Alabama is better prepared to train her own skilled workmen at home than she is to compete with wealthier States in the North for her skilled labor. And the importation of a large foreign element, unfamiliar with southern conditions, will further complicate the race problem in Alabama.

It is evident, then, that both from the standpoint of agriculture and industry, the education of the Negro along vocational lines is desirable and necessary. In order to determine just what kind of education is best adapted to his needs, the occupations now followed by the breadwinners of the race should be studied. The following table shows the vocations followed by Negroes in Alabama, according to the 1910 census of occupations. These figures are the latest available, but it should be borne in mind that since the census of 1910 the number of occupations followed by Negroes has increased, as a result of changing conditions.

TABLE 37.—*Principal occupations of Negroes 10 years of age and over.*

Occupations.	Males.		Occupations.	Females.	
	Number.	Per cent.		Number.	Per cent.
Agriculture, forestry, and animal husbandry	201,421	71.15	Agriculture	151,824	71.19
Extraction of minerals	16,170	5.71	Manufacturing and mechanical industry.	2,747	1.29
Manufacturing and mechanical industry.	32,595	11.51	Transportation	3	.00
Transportation	14,689	5.19	Trade	365	.17
Trade	6,365	2.25	Public service	2	.00
Public service	992	.35	Professional service	1,855	.87
Professional service	1,957	.69	Domestic	56,350	26.43
Domestic and personal service	8,177	2.89	Clerical	124	.05
Clerical occupations	761	.26			
Total	283,127	100.00	Total	213,279	100.00

It will be seen from the table that agriculture and its allied vocations predominate in the case of both men and women. In the case of the men, manufacturing and the extraction of minerals come next, and in the case of women, domestic service and manufacturing. Practically all the female breadwinners were reported as engaged either in agriculture or domestic service. Transportation, trade, and personal service are important vocations followed by men. It will be interesting to compare these figures with a tabulation of the occupations followed by the 2,266 graduates of the Agricultural and Mechanical College. The 2,266 graduates are divided among the departments as follows: Academic, 1,217; agriculture, 118; household economics, 704; mechanic arts, 227.

TABLE 38.—*Vocations followed by graduates of Alabama Agricultural and Mechanical College.*

Principals	163
Teachers in rural schools	296
Principals in high schools	24
Teachers in grammar or high schools	90
Doctors	41
Lawyers	5
Dentists	8
Pharmacists	3
Druggists	10
Working at trades	302
Bankers	1
United States Government service	39
Jeanes teachers	7
Directors of book establishments	2
Editors and journalists	8
Bookkeepers	15
United States farm demonstrators	2
Undertakers and embalmers	6
Contractors and builders	8
Farmers	340
Housekeepers	498
Dead and unaccounted for	398
Total	2,266

These figures show that the State school has made of its graduates efficient workers in the vocations followed by Negroes in Alabama. As the skilled worker produces more wealth than the unskilled one, the Agricultural and Mechanical College has evidently been a paying investment to the State. Aside from economic considerations, however, the training of a safe and sane leadership for the colored race has been of inestimable value to the State.

Specific recommendations.—The committee makes the following recommendations on Negro rural schools:

1. That a larger portion of the public school funds be apportioned to Negro schools.
2. That salaries of competent Negro teachers be increased to such an extent as will induce those who have proved their competency to remain in the service of the schools.
3. That the number of Negro teachers be increased so that there will be a better ratio of teachers to pupils enrolled.
4. That the compulsory education laws be applied to all the children of school age, both white and colored.
5. That the course of study in Negro schools be made more practical and related more closely to the life of the children, so as to meet their needs.
6. That State aid be provided for county training schools on the basis of an annual appropriation of $750 to each school, to match the $750 now appropriated by the county board of education to maintain the school. The sum of $19,500 is enough to aid the 11 schools now in operation, and to encourage the establishment of 15 more that are badly needed. State aid should be increased when possible, so that the schools may be better supported.
7. That the State aid counties in maintaining supervisors of primary work.

8. That the number of county industrial supervisors be increased to such an extent that their work can be carried on in the 45 counties having the largest Negro populations.

9. That the county boards of education consolidate Negro rural schools where possible so as to increase the number of two-teacher schools or three-teacher schools. In many counties the Negro population is so large that this can be done without necessitating transportation of pupils. Where practicable a man and his wife should be employed for the entire year, so that they may be community leaders as well as teachers.

10. That the minimum term in colored schools be six months.

11. That the State increase its appropriation to the Agricultural and Mechanical College to the amount of the Federal Government's aid, and provide the school with modern dormitories and an academic building.

12. That the State Normal School at Montgomery eventually be moved out of the city, provided with dormitories, and located on a tract of at least 100 acres of land. The present building should be sold to the city of Montgomery for a high school.

13. That if the State find it undesirable to carry out recommendations 10 and 11, the two schools be consolidated, and an agricultural and mechanical normal school be established, at such place as will be most accessible to the large body of the Negro population of the State. The school should have at least 150 acres of good land for cultivation, and ample provision for board and lodging of students. The school should be placed under the same control as the normal schools for the preparation of white teachers. With the Federal appropriation for agriculture and mechanic arts and the State appropriation the school should have an income of at least $50,000.

Chapter X.

VILLAGE AND TOWN SCHOOLS.

General background.—Alabama has 233 incorporated towns of less than 2,500 population, with an aggregate population of 164,511. These comprise 55 places of 1,000 to 2,500 inhabitants each, with a combined population of 84,944; 66 places of 500 to 1,000 inhabitants each, with a combined population of 45,807; and 112 places of less than 500 inhabitants each, with a combined population of 33,760. The number of incorporated towns has been steadily increasing. In 1890 there were only 100 such places; in 1900 there were 173; and in 1910 there were 233. In 1890 4.7 per cent of the total population lived in towns of less than 2,500 population; in 1900, 5.8 per cent; and in 1910, 7.7 per cent. At the same time, the other rural population decreased from 85.2 per cent in 1890 and from 82.4 per cent in 1900, to 75 per cent in 1910.

Since the school laws of the State of Alabama class all places of 2,000 or more as cities, only the schools of those towns of less than 2,000 population will be discussed in this section. There are 211 such towns that are incorporated, or an average of 3 to each county. These small towns may be divided into the following classes: Mining towns, mill towns, and agricultural towns.

In the iron and coal mining sections of the State these small towns are made up of miners, bosses, and superintendents and their families. Some of these towns are models of neatness, beauty, and sanitation. The schools in some are very good. Several of the mill towns are also models. Some of the mining and mill companies are expending large sums of money to improve social and educational conditions so as to make their employees contented, and to afford them every opportunity to develop socially and intellectually. In others the companies take no interest in the lives of the employees and social and educational conditions are far from ideal.

The larger number of towns are found in the midst of the farming section of the State. These towns usually consist of a few stores, several churches, sometimes a bank, often a gin, a post office serving as a rural delivery center, and a school.

Administration and supervision of town schools.—As previously stated the schools in incorporated towns of less than 2,000 population are managed and controlled by the county board of education as if they were not within the incorporated territory. There is no board of education in these towns except the trustees appointed by the county board for the district. This provision is a wise one. Indeed, the limit as to population could well be raised. The town school district is usually larger than the incorporated district. In fact, the town school district can be made any size the county board sees fit to make it.

As a result in Alabama there are few schools within a radius of 2 or 3 miles of the villages. In those States where the village school is independent of the county or township board it is not unusual to find a number of one-room schools within sight of the village schoolhouse. When village schools are under the management of the county boards, they may be better classed and controlled as rural schools, as they are, or should be.

The rural town a center of business life.—Most of the villages in the rural communities of Alabama are the centers of business life of a considerable community. They are usually the trading points for the farmers of the neighborhood, who go to the village to buy and sell, to have farm implements repaired, to have mules shod, to borrow money at the bank until the crop is sold, or to deposit money. Some farmers live in the villages and rent their farms. At any rate, the village is dependent upon the surrounding country for its existence, and should be a part, and not independent, of the purely rural community.

The villager and the countryman must learn to cooperate. The way to bring about cooperation is to associate together and think together. One school for the entire community will help to bring about community thinking and community cooperation.

Association of town and country people.—The consolidated school at Five Points, Chambers County, is an illustration of what a community school will do, not only for the village, but for the entire community. Before the establishment of the consolidated school at Five Points the village and the surrounding country were dead; there was but little interest in farming. There was no intellectual or social life. The entire community was becoming "deader" each year. Finally, through the influence of a few men and women, a consolidated school was organized at Five Points, a village of 300 population. What was a dead village with a few stores became alive. There are now in the community six stores, a bank, a hotel, a gin, a blacksmith shop, and two churches.

Before consolidation, the most unattractive building at Five Points was the school building. It was weather-beaten and dingy, consisting of two classrooms—one large with a stage, one small—and a dark and narrow hall. It was poorly equipped with uncomfortable, homemade desks and had painted walls for blackboards. The absence of windowpanes reinforced the usual free ventilation of such an old building. It was uncomfortable, insanitary, and uninviting; yet the children, the most precious product of the village and its most valuable asset, were compelled to spend seven hours each day, five days a week, and seven months each year, in this makeshift of a school building.

The children living in the country fared even worse, since they attended one or two teacher schools even poorer than the one at the village of Five Points. Now, the village children and country children living 6 or 7 miles from Five Points attend the same school in a modern school building. The location of the consolidated school at Five Points has proved a blessing not only to the children, but to the adults. The whole community, country and town, has been organized into the Five Points Community Association, in which young and old alike are eligible to membership. This organization holds meetings biweekly at the school building. The people do not meet just for the sake of holding a meeting, but to discuss community problems and current topics. The work of the Community Association is carried on by committees. A good idea of it may be had from the following outline:

1. *A committee on public schools.*—The duty of this committee is to improve and beautify school premises; to increase the supply of school apparatus; to build up a library; to provide playground equipment; to encourage school attendance; to provide instruction for the illiterate and others desiring a common-school education, but who are unable to attend the day school; and to encourage school visitation by patrons.
2. *A committee on health and community sanitation.*—It is the duty of this committee to obtain united effort of the community to maintain sanitary conditions; to combat epidemics; to exterminate germ-carrying insects; to provide for the distribution of health bulletins; and to invite speakers, from time to time, to discuss health problems before the association.
3. *A committee on literary, musical, and social culture.*—This committee provides occasional literary and musical entertainments and social gatherings; has charge of the magazine exchange, arranges educational games; organizes and conducts a story-tellers' league and a reading circle.
4. *A committee on agriculture and home economics.*—This important committee cooperates with the county demonstration agent and other agencies established for the upbuilding of agricultural interests; improves home-life facilities in the community; arranges for farmers' educational meetings from time to time; plans the organization of pig, poultry, and canning clubs; and introduces approved systems of cooperative industries.
5. *A committee on finances.*—This committee considers the needs of every department of work and proposes quarterly budgets for the intelligent guidance of the association in making appropriations. It devises ways and means of securing funds for the prosecution of the association's work.

At the biweekly meetings, topics of general interest are discussed first. The session then breaks up into departments, each person going to that in which he is most interested. The attendance of farmers, business men, and their wives often numbers 200 or more.

This one example shows how a decadent village community may be made alive by consolidating rural and village schools.

Reorganization on the six, three-and-three plan.—The difficulty of transporting children to school because of bad roads can be overcome to some extent by keeping the children of the first six grades in the school near their homes and transporting the older ones, or those in grades 7, 8, 9, to some central junior high school in the open country or village—provided such village is rural minded. If it is not, if it does not cooperate in every way with the purely rural community, it is no place for a consolidated school. If the village school is small it should not attempt more than junior high-school work, as some are now doing and failing to do well. Pupils of grades 10, 11, 12 in the smaller villages should attend a senior high school in one of the larger towns or the county high school.

The school a community center.—The rural village school must do more than make individuals intellectually efficient and able to struggle successfully for wealth, power, and influence. The reorganized village school should be a center for community reconstruction. One of the evils of rural and village life is monotony and lack of human fellowship, and too narrow thinking. The village schools serving as a center of community life for the people who naturally congregate at the village for business purposes would break up this isolation and provincialism. In many villages there are few vital topics of conversation. The village gossip has become a character in literature. There is need of some institution to create and conserve common interest. For this purpose there should be a common meeting place where there may be free and open discussion on the great topics of the day. For illustration, every village community should discuss local improvements, cooperative methods of buying and selling, proposed State legislation, national and even international problems. There is but one logical place for such discussions, and that is the public school, the one building in the community dedicated to democracy. The school buildings should be open not only for the discussion of public questions, but for purely social purposes, especially for the young people of the community. It is to be regretted that not many village school buildings in Alabama have been planned with the view of making them community-center buildings, there often being no auditorium or any other rooms suitable for holding public meetings.

Elementary school course of study.—The course of study used in village schools is not adapted to the environment. The same facts and the same illustrations are used in the rural town as in the city schools. Arithmetic, for instance, is not given a rural application, most of the problems solved are of the counting house instead of the farm. The language lessons are based upon topics remote from the life and experience of the child instead of upon what is near on the farm or in the village. Geography is begun not at home but at some distant point. What little drawing there is is not based upon material from the field but upon lessons in books. Nature study has a very subordinate place and is mostly bookish. Community civics, hygiene, music, manual training, home economics, and physical training have not yet found a place in most of the small town schools.

A study of the time schedules of six small town schools reveals the fact that the subject of arithmetic is unduly emphasized in the primary grades, the time ranging from 100 to 400 minutes a week in the first grade, from 150 to 450 minutes in the second grade, and from 125 to 375 minutes in the third grade. That arithmetic is a fetish in these schools is evident, since the largest percentage of failures is in that subject. It is not unusual for a child in the first grade to fail in arithmetic. As a formal subject, arithmetic scarcely has a place below the third grade, at least not below the second grade. About the only number work that the child in the primary grades should have is the use of number facts that arise in his daily work in other subjects, as in hand work. If formal work is given it should deal with easy combinations. In the upper grades the time allotted to arithmetic in the small town schools of Alabama is usually 150 or 200 minutes a week. This is about the average amount throughout the country. In the primary grades spelling occupies from 75 to 300 minutes a week. It is doubtful whether spelling should be given as a subject separate and apart from the reading lessons in the primary grades. At least not more than 75 minutes a week should be given the subject. Reading naturally takes more time in the lower grades than any other subject, the time allotment ranging from 150 to 900 minutes in the first grade, from 150 to 750 minutes in the second grade, from 150 to 400 minutes in the third grade. After this grade the time allotment rapidly diminishes to 150 minutes a week in the seventh grade. Although the time allotment for reading in the primary grades is great the results are not what one would expect. In many instances only one supplementary reader is provided. In practice phonics are slighted.

Formal grammar is begun in most of the town schools in the third or fourth grade. One hundred and fifty minutes a week is the usual time devoted to it, beginning with the third grade and running through the seventh. But little attention is given to oral and written composition. Grammar as a formal subject should be offered below the seventh grade.

As previously mentioned, nature study holds a subordinate place or no place at all. The time usually allotted is 60 minutes a week. Nature study should lead up to and be included with much of the geography. The time allotted to geography is usually 150 minutes a week, beginning with the third or fourth grade and continuing through the seventh. United States history does not occupy the same important place as do many of the other subjects, as formal grammar and arithmetic. The usual time allotment for history is 150 minutes a week for two or three years. This would no doubt be sufficient for the subject in the elementary schools if it were preceded by history stories, biography and the like. Civics when taught is generally of the old type—an analysis of the constitution—instead of a study of community life.

Penmanship is practically neglected. Here and there some little time is given to the subject. A few more minutes a week could well be devoted to the subject in drills for movement and form. Music and drawing with the exception of one or two schools visited receive but little attention. Manual training and home economics are almost unknown in the elementary grades of the small town school. Physical training, which should have a place in every school program, is confined, with a few exceptions, to what exercise may be had at recess periods without supervision.

High school course of study.—The village high school course of study is bookish and almost purely academic. Practically all the small town high schools require English for four years, which is in accord with modern educational thought. Three years of mathematics are required, algebra two years, and plane geometry one year. Solid goemetry and algebra are offered in the senior year. In many schools three years of history are required—two of European and one of American. Latin is an elective. Some schools also offer French or Spanish. The agriculture taught is of a bookish nature; usually there is no demonstration or home-project work. The sciences are usually taught without sufficient or any laboratory equipment. As an illustration of the subjects studied and the number of pupils studying each subject the course of study of the consolidated school at Five Points is presented:

First year:	Number of pupils enrolled.
English	19
Arithmetic, ½ year	19
Algebra, ½ year	19
General science, ½ year	15
Agriculture, ½ year	15
Latin	4
Domestic science	19
Manual training	19

Second year:	Number of pupils enrolled.
English	14
Algebra	14
Bookkeeping, ½ year	14
Commercial law, ½ year	14
Latin	5
Agriculture, ½ year	9
Botany, ½ year	9
European history	14

Third year:	Number of pupils enrolled.
English	12
Physics	12
Latin	4
Civics, ½ year	8
Economics, ½ year	8
European history	5
Spanish	7

Fourth year:	Number of pupils enrolled.
English	5
Solid geometry, ½ year	5
General review of different subjects, ½ year	5
Chemistry	5
U. S. history	5

At Five Points, as nowhere else in Alabama, one would expect to find a course of study related to village and rural life, but upon examination it is found to consist largely of the subjects offered in a college preparatory course. In the midst of one of the great farming sections of Alabama the subject of agriculture has scarcely a place. Home economics and manual training are given only for one year. Bookkeeping is that of the counting house instead of farm bookkeeping as it should be. Fairly well-equipped laboratories are provided for the teaching of physics and chemistry, but these subjects are not given a rural application. Botany could be made a live subject by relating it to the flora of the region.

The course of study places too much stress upon algebra and geometry which are probably the least important subjects in the whole course for the average farm boy or girl. A year of algebra and constructive geometry might be required, but to require mathematics for three years and then to offer it as an elective in the fourth year can not be defended in a small high school or in fact in any school. The course of study at Five Points and every rural village in Alabama, should be revised and made a farm community course of study.

Improvement of rural and village course of study.—The village schools in Alabama, as well as elsewhere, are weak and are not living up to their possibilities, because they do not provide education in terms of rural experience. One of the fundamental principles in education is that instruction should begin with that which is simple and familiar and work out to that which is more complex and remote. To know things at home is to know the world. If the rural village schools of Alabama were to follow this fundamental principle, they would make use of home geography, of problems in arithmetic related to rural life instead of to city life, of local history, of community civics; in fact, there is no subject in the elementary school course that can not be related to rural village life.

Agriculture may be taught in a practical way in a village school. Grounds suitable for demonstration purposes may be found in or near every village. Boys living on farms may, by means of home projects, apply the principles of agriculture learned in the classroom and on the school demonstration plat. Science teaching may have rural application. Practical application may be made of chemistry in the analysis of soils. Botany, with economic applications, is possible.

The course should include home gardening directed by the school. In the villages visited there were many unsightly backyards and vacant lots that could have been made attractive and productive if they had been planted into gardens. It is true that many of the children living in villages cultivate gardens at home, but their efforts are undirected. If the work were directed by the schools, many correlations of gardening with arithmetic, language, drawing, manual training, nature study, and other subjects would be possible.

When the materials used in the village schools are drawn largely from the cities, and the child's attention is continually directed to city life, he is not taught to appreciate his surroundings nor his opportunities. He, therefore, goes to the city at the earliest moment to seek wealth and power, when, in reality, both of these might be found in his own village community. It is not advocated that every rural or village youth remain in a rural environment, but that the village course of study be based upon rural life so that more children may see the many opportunities in their own community.

Mill and mining town schools.—The schools in the mill and mining towns of Alabama, supported by public funds, are much the same as those of rural villages just described. In Chambers County the cotton-mill corporation operating the mills at Shawmut and the three other mill towns in that county add several thousand dollars a year to the running expenses of each of the schools for salaries, a longer school term, free textbooks, and other things that the county board can not provide under the present system of assessing property. The company has erected modern sanitary school buildings in each of the towns. A cottage is provided for the principal of each town school, a teacher cottage is also provided, a charge of $15 a month being made for room and board. The company also supports a kindergarten in each town, paying the teachers, providing supplies, furnishing a building, etc. Surrounding each school building are large playgrounds well equipped with play apparatus.

In each town there is a night school supported by the company. The mill workers who desire to become more proficient are given instruction in such subjects as will aid them to realize their desires. Most of the night-school students study textiles. Many of the illiterate are taught to read and write.

The cotton-mill company in Chambers County has already made plans for part time classes for older boys and girls who have dropped out of school and who are working. They can work half of the day and attend school the other half. The pupils will have classroom instruction regarding textiles and make the practical application in the mills. Other subjects, as literature, history, community civics, personal hygiene, and home economics should have a place in the part-time courses.

A feature of the educational program of each of the mill towns is a lyceum course which is offered during the winter months in a community building with which each town is provided. Moving pictures are shown three times a week. The community halls are used for social and recreational purposes. The next step in the use of these halls would be to have them open for the discussion of public questions.

At the mining towns where the Tennessee Coal & Iron Co. has mines may be found schools equal or even superior to those in the cotton-mill towns of Chambers County. The school buildings are beautiful and well adapted to school use. The playgrounds are large and well equipped. The school gardens are unexcelled in the State. The social and recreational life of each community is well provided for by means of a clubhouse.

The mill town schools in Chambers County and the mining town schools supported in part by a private corporation are examples of what financial support will do for schools. When one goes from these schools to most other town schools in the State it seems like going from a beautiful well-kept avenue in a large city to a back alley.

School libraries.—Most of the town schools contain a library, but in many instances the books are too few in number and not well selected. A separate room is rarely provided.

The library should comprise books to supplement the texts used in school literature, biography, history, books of travel, and books of science popularly treated. A number of good books of fiction should be provided for general reading. At least three or four magazines treating of the topics of the day should be on file for the use of the schools and the public. Several magazines on teaching and general educational topics should be provided. A village school library thus equipped would add immensely to the efficiency of the schools. The library room should be open to the public as a reading room.

As an illustration of the use made of a town library, data regarding the library at Langdale are presented: This library is not directly connected with the school, being supported by the cotton mill corporation operating at Langdale, but it is on the school grounds and works through the schools. In any other town a purely school library in charge of a librarian could no doubt accomplish as much.

Data of the library at Langdale.

Year.	Books charged.	Magazines charged.	Magazines received.	Number of visitors.
1913	1,309	613	487	2,474
1914	1,235	860	653	4,973
1915	1,741	1,161	593	5,104
1916	2,123	1,160	647	4,906
1917	1,849	553	814	5,217
1918	2,816	234	758	4,627
Total	11,073	4,581	3,952	27,301

Retardation and elimination.—Since the elementary school course in Alabama is seven years in length, the child entering at 7 years of age and making one grade each year completes the course at 14. In compiling the data on age and grade children of the first grade 6 and 7 years of age are considered normal; all 8 years of age and over, over age. In the second grade children under 7 years of age are considered under age; all 7 and 8 years of age, normal, and all 9 or more years of age, over age, and so on throughout the grades, allowing two years for the normal age. This is a liberal allowance for normality when the fact is taken into consideration that the ages are taken at the beginning of the term.

TABLE 39.—*Distribution of white children by age in towns below 2,000 population.*

Grades.	Under 6 years.	Over 6 years up to 7 years.	Over 7 years up to 8 years.	Over 8 years up to 9 years.	Over 9 years up to 10 years.	Over 10 years up to 11 years.	Over 11 years up to 12 years.	Over 12 years up to 13 years.	Over 13 years up to 14 years.	Over 14 years up to 15 years.	Over 15 years up to 16 years.	Over 16 years up to 17 years.	Over 17 years up to 18 years.	Over 18 years up to 19 years.	Total by grades.
I	360	1,883	3,088	1,670	1,028	555	287	184	112	61	18	10	6	3	9,263
II	18	177	1,240	1,507	1,097	627	379	200	143	72	29	11	3	....	5,503
III	....	33	289	930	1,247	954	655	469	267	118	79	39	7	5	5,083
IV	....	.....	48	215	839	1,238	872	745	484	290	236	62	17	4	5,050
V	....	.....	.....	67	225	755	1,005	832	606	369	248	61	29	8	4,205
VI	....	.....	.....	6	68	212	622	927	748	570	338	165	56	22	3,734
VII	....	.....	.....	.....	2	20	168	541	805	669	574	304	171	61	3.315
VIII	....	.....	.....	.....	.....	.....	15	133	307	490	398	344	217	175	2,079
Total of ages	378	2,093	4,663	4,395	4,506	4,352	4,003	4,031	3,472	2,639	1,920	996	506	278	38,232

TABLE 40.—*Distribution of town children (white) with reference to normal age.*

Grades.	Number in each grade.			Total in each grade.	Per cent in each grade.		
	Under age.	Normal age.	Over age.		Under age.	Normal age.	Over age.
I	360	4,969	3,934	9,263	3.9	53.6	42.5
II	195	2,747	2,561	5,503	3.5	49.5	46.9
III	322	2,177	2,584	5,083	6.3	42.8	50.9
IV	263	2,077	2,710	5,050	5.2	41.1	55.7
V	202	1,760	2,153	4,205	6.9	41.8	51.3
VI	286	1,549	1,899	3,734	7.6	41.5	50.9
VII	190	1,346	1,779	3,315	5.7	40.6	53.7
VIII	148	797	1,134	2,079	7.1	37.8	55.1
Total	2,056	17,422	18,754	38,232	5.3	45.5	49.2

A comparison of these data with similar data for 62 counties (schools outside of cities) in Colorado shows that the rate of retardation in Alabama towns is large. In the 62 counties of Colorado 10 per cent of the children are under age, 63 per cent normal, and 27 per cent average.

Causes of retardation.—Even without comparison with other school systems it is evident that there are too many overage children in the town elementary schools. The cause is, in the opinion of the committee, due to several factors and includes irregular attendance, inadequate supervision, uninteresting and ineffective teaching, and a course of study not adapted to needs of children. It is impossible to say which is the greater factor in causing retardation, but poor teaching and irregular attendance which is conditioned to a certain extent upon teaching are the chief contributing factors.

The problem.—The seriousness of retardation has not been realized by most principals and teachers. It is concerned with the results to the child himself, the educational loss to the State, and the financial loss which comes from the added expense of repeating grades. Of these the first two are the most important. The child loses interest and drifts along or leaves school altogether while the State loses the possibility of adding to its population an educated citizen. A majority of the children are so retarded that they do not go far enough in school to acquire the skill, knowledge, and culture which the school aims to inculcate. Their education is not comprehensive, and the school impressions are superficial. With a retardation rate of 49 per cent many children complete only a few grades, thus merely passing beyond illiteracy. Some of these may, if they have the inclination, become fairly well-educated citizens by reading newspapers and magazines, but the chances are that they will not since they do not have a background of knowledge sufficient to interpret what they read.

Education of the teachers.—The educational and professional standard for elementary teachers should be four years high school and two years normal school work. Measured by this standard the town schools of Alabama fall short. The amount of schooling the teachers of these schools, both elementary and high, have had beyond the seventh grade averages about three years. Of the teachers reporting to the survey committee 24 per cent have not attended school beyond the elementary grades, with the exception of the few who have attended one or more summer schools. Of those who have attended high school 8.4 per cent have attended 1 year; 15.7 per cent 2 years; 25.3 per cent 3 years; and 58.6 per cent 4 years.

Of the total number of teachers reporting 32.8 per cent have attended and 14.3 per cent have graduated from a normal school.

Many of those who have attended normal school have done so for only one term. One and two-tenths per cent have graduated from college, and 15 per cent have attended college a year or more or for a summer term or two.

It is interesting to compare the preparation of town teachers in an old State like Alabama with the preparation of rural school teachers in a new State like Arizona. In Alabama 42.2 per cent of the town teachers have attended high school for four years, in Arizona 83.4 per cent of the purely rural teachers have attended school four or more years above elementary school, and 68.4 per cent have five or more years of secondary and higher education.

Teachers' salaries.—One reason that the teachers in Arizona are better prepared than those in Alabama is that the annual salary of teachers in the one State is two or three times that in the other—all this in spite of the fact that Arizona is a desert country, only a few fertile spots appearing here andthere. In Alabama there is mineral wealth, the mountains and some of the plains are covered with virgin forest, nearly every part of cleared land yields cotton and corn, yet the teachers are not paid salaries such as afford a motive for making special preparation for teaching.

The prevailing salary for village teachers in Alabama is between $400 and $500 a year, while for the county at large it is between $500 and $600; in the Middle Atlantic States between $500 and $600, in the Southern States between $400 and $500, in the Central States between $500 and $600, and in the Western States between $700 and $800. The village school principals in Alabama receive between $900 and $1,000, while for the country at large they are paid from $1,100 to $1,200.

Village school principals.—Though the village schools of the State of Alabama are under the supervision of the county superintendent, the principal should do some supervising, especially in the larger villages. The chief function of the village school principal, however, is to be a community leader in the improvement of educational conditions. In too many instances he is content to close the school building after the day's work and then to drift along with the current of village thought on educational subjects. Village community life is simple, but in most instances the members do not work together. An organizer and director of social and educational life is needed. The principal of the village school district, whether it embraces only the village proper or the entire community, should be more than a pedagogue. He should be an educator in every sense of the term, a community leader—not a follower, a guide setting up ideals of accomplishment. In too many schools visited in Alabama the principals do not realize their opportunity as leaders nor have they caught the vision of better village life and better school facilities for educating the whole community, young and old.

Specific recommendations.—1. Continue the present plan of placing towns of less than 2,000 population under the control and management of the county board of education.

2. Encourage the levy of local taxes in all village and town districts so as to enable the board to discontinue the practice of charging tuition fees.

3. Limit the smaller village to nine grades of work. Organize the seventh, eighth, and ninth grades as junior high school. Organize the larger village schools, elementary schools (grades 1–6), junior high school (grades 7, 8, 9), and senior high school (grades 10, 11, and 12).

Chapter XI.

THE DISTRICT AGRICULTURAL SCHOOLS AND COUNTY HIGH SCHOOLS.

I. DISTRICT AGRICULTURAL SCHOOLS.

History of their organization.—Alabama was the pioneer in bringing into existence a system of congressional district agricultural schools. This work was begun in Alabama 17 years before a similar system was established in Georgia, and these States are the only States which have as a part of their educational system an agricultural school for each congressional district. The Alabama system of congressional district agricultural schools was initiated under the provisions of a bill, approved February 28, 1889, "To establish a branch agricultural experiment station and branch agricultural school in North Alabama." Under this act two schools were organized, one at Athens and the other at Abbeville.

It was provided originally that the board of control for each institution should consist of the commissioner of agriculture, the director of the experiment station at Auburn, and five progressive farmers. The board of control was given the power to elect presidents, teachers, and directors, and to manage the schools and stations as it should think best. For the first year the State appropriated $3,000 to each school, and for every year thereafter $2,500, payments being made quarterly. The board of control was given authority to purchase land, not exceeding 40 acres for each station, and to construct the necessary buildings and other improvements. It was provided that experiments should be made at the stations to advance the interests of scientific agriculture and that chemical analyses should be made by the State chemist under the supervision of the commissioner of agriculture.

The act establishing these schools was amended on February 13, 1893, the amendment providing that the schools should receive $3,000 annually and the board of control be authorized to purchase 80 acres of land for each school. Similar acts of the legislature have brought into existence seven other district agricultural schools, so that at the present time Alabama maintains nine agricultural schools, which according to the original plan were located one in each congressional district, but with the redistricting of the State in 1915, two schools were included within the limits of the seventh district. It would, therefore, appear that the State superintendent is correct in his suggestion that the legislature of 1919 should change the names of these schools by omitting the word "district."

At present each school receives an annual appropriation for maintenance of $4,500, with the condition that $750 must be used by each school in the specific work of agriculture. Each school derives approximately $12 a year matriculation fee from each pupil entering the school. Various acts since 1889 have finally placed the schools under a board of control consisting of the governor, the superintendent of education, the commissioner of agriculture, and two local members appointed by the governor, residing in the congressional district in which the school is located.

Changing the original purpose of the schools.—There are many evidences to show that these schools have made in most cases an honest effort to comply with the purpose of the legislature. They failed to accomplish the primary purpose of their establishment, owing to the fact that the people made them serve what they felt was at the time of their establishment their greatest need irrespective of mere name. They changed the institutions which were originally intended to serve a whole congressional district, to purely local schools with a local patronage and organized them to suit their own needs. In 1900–1901 the total patronage of the schools reached 2,243.

This development caused dissatisfaction, and in response to this feeling there has been a formal effort to bring them nearer the original purpose for which they were organized. The superintendent in his 1912–13 report says:

> Last summer at the close of the year's work the board of control of these schools reorganized completely the course of study, with a view to making agriculture and agricultural instruction both in theory and practice the paramount consideration of every student connected with these institutions. Whatever criticism the public may have made of these district schools was based upon the theory that they were not doing the full amount of agricultural work intended by the law establishing them. The board believes that the complete reorganization of the course of study upon which these schools have entered for the year now begun will remove all basis for reasonable complaint of this kind.

In further commenting upon these schools the superintendent in his 1918 report says:

> For more than 10 years, however, the agricultural schools have been brought into rather serious competition with county high schools, and since the latter are regarded as county institutions and are often able to get appropriations from the county boards of education and boards of revenue, it has become increasingly difficult for the agricultural schools to retain their hold upon popular favor. In fact, they have not infrequently been referred to as the "fifth wheel" in our educational system.

It would appear now that these schools have been given the last opportunity to function in accordance with the acts establishing them by complying with the requirements set up for vocational agricultural instruction by the State board for vocational education.

In keeping with the Federal vocational educational act the State superintendent says in his 1918 report:

> The State board for vocational education arranged with the board of control of the agricultural schools to introduce vocational agriculture in all these schools for the year beginning July 1, 1919. This has meant the employment of a specialist in agriculture who gives his entire time to this work. The school provides equipment to the amount of $300 or more and a maintenance fund of $100 annually. The general course of study has been revised and a special course of study has been prepared under the direction of the State superintendent of education in keeping with the Federal requirements, 50 per cent of the pupils' time being given to vocational agriculture including supervised project study and general instruction in agricultural projects. The remaining 50 per cent of the time is devoted to English and kindred subjects, such as will give culture and good citizenship training.

Teaching staff of the district agricultural schools.—Three of the nine principals are also the vocational teachers of agriculture. Data gathered through a questionnaire and by personal visitation to each of the nine schools show that the principal of each school is either a graduate of the Alabama Polytechnic Institute, the University of Alabama, or of an institution of like grade. All the agricultural teachers are graduates of the Alabama Polytechnic Institute except two—one a graduate of the Mississippi A. & M. College and the other a graduate of the Peabody College for Teachers. A study of the preparation of the other teachers in the schools shows that many of them are graduates of the Alabama Girls' Technical Institute, the University of Alabama, the Alabama Polytechnic Institute, the Woman's College at Athens, and other denominational institutions, as well as a few who are graduates of only a State normal school.

A discussion of teacher-training in agricultural education will be found in the chapter relating to the Alabama Polytechnic Institute. The principals and teachers of vocational agriculture receive salaries ranging from $1,800 to $2,300 a year. All the agricultural teachers receive $2,000 a year except in cases where the agricultural teacher is also principal of the school. There is one exception to this where the agricultural teacher receives only $1,800.

Student enrollment.—The total enrollment for this year is 1,217. Of this number there are 550 boys and 667 girls. Of these, 258 boys and 289 girls, respectively, are from farm communities.

Some of these schools are merely local schools and some reasonably representative. To show this the following figures are presented:

THIRD DISTRICT AGRICULTURAL SCHOOL, ABBEVILLE, ALA.

1914–15:

Barbour	2
Coffee	2
Henry	68
	72

1915–16:

Montgomery	1
Henry	86
	87

1916–17:

Dale	3
Montgomery	1
Henry	86
	90

1917–18:

Barbour	2
Dale	3
Henry	62
Houston	1
	68

1918–19:

Barbour	2
Dale	4
Henry	60
	66

FOURTH DISTRICT AGRICULTURAL SCHOOL, SYLACAUGA, ALA.

1914–15:

Bibb	2
Calhoun	1
Clay	1
Coosa	3
Shelby	3
Talladega	123
Tallapoosa	2
Tuscaloosa	2
	137

1915–16:

Bibb	2
Calhoun	1
Clay	6
Chilton	1
Coosa	6
Elmore	1
Jefferson	5
Shelby	1
Talladega	115
Tallapoosa	1
	139

1916–17:

Bibb	2
Clay	10
Chilton	1
Coosa	5
Dallas	3

1916–17:—Continued.

Elmore	1
Jefferson	2
Shelby	2
Talladega	120
Tallapoosa	2
	148

1917–18:

Bibb	2
Clay	6
Coosa	5
Crenshaw	1
Jefferson	1
Lee	2
Shelby	1
Talladega	130
	148

1918–19:

Calhoun	2
Clay	3
Coosa	23
Etowah	1
Jefferson	1
Lee	1
Talladega	133
Tallapoosa	3
	167

EIGHTH DISTRICT AGRICULTURAL SCHOOL, ATHENS, ALA.

[Average for four years.]

1914–18:

Limestone	150
Lawrence	5
Lauderdale	4
Morgan	3
Madison	5
Cullman	2
	169

1918–19:

Limestone	151
Lauderdale	2
Morgan	1
Walker	1
	155

SIXTH DISTRICT AGRICULTURAL SCHOOL, HAMILTON, ALA.

1914–15:

Marion	165
Franklin	27
Fayette	23
Walker	14
Pickens	7
Tuscaloosa	5
Lamar	3
Jefferson	2
Colbert	1
Lauderdale	1
	248

1915–16:

Marion	105
Franklin	30
Fayette	20
Walker	16
Lamar	6
Tuscaloosa	4
Pickens	2
Colbert	2
	185

1916–17:

Marion	159
Franklin	29
Walker	17
Fayette	12
Tuscaloosa	5
Winston	4
Lamar	7
Lauderdale	2
Colbert	2
Pickens	1
Jefferson	1
	239

1917–18:

Marion	155
Franklin	124
Walker	11
Fayette	8
Lamar	6
Tuscaloosa	6
Jefferson	4
Pickens	1
Colbert	1
Coosa	1
Marshall	1
	318

FIRST DISTRICT AGRICULTURAL SCHOOL, JACKSON, ALA.

1914–15:

Clarke	54
Washington	2
	56

1915–16:

Clarke	63
Washington	2
Choctaw	1
	66

FIRST DISTRICT AGRICULTURAL SCHOOL, JACKSON, ALA.—continued.

1916-17:	
Clarke	57
Washington	5
Choctaw	1
	63
1917-1918:	
Clarke	60
Washington	7
Choctaw	6
	73

1918-19:	
Clarke	59
Washington	5
Choctaw	6
Monroe	1
	71

A comparative statement concerning the growth in enrollment by years of the county high schools and the district agricultural schools is of interest:

Year.	County high schools.	District agricultural schools.	Year.	County high schools.	District agricultural schools.
1911	2,317	1,004	1916	5,468	1,157
1912	3,079	1,082	1917	5,887	1,219
1913	3,697	1,101	1918	5,517	1,139
1914	4,183	1,082	1919	....	1,217
1915	4,576	1,075			

Of the total enrollment of 550 boys in the district agricultural schools this year only 158 are taking the vocational course in agriculture. Of the enrollment of vocational pupils in agriculture 28 pupils are not from farms, and are depending upon the school farm to supply them with sufficient facilities for carrying out the six months' directed or supervised practice in agriculture.

Serious losses of enrollment through elimination.—In the agricultural schools during the past year serious losses are shown in many instances. The minimum retained in any school is 42 per cent and the maximum 96 per cent. The average percentage retained in the agricultural schools is 65 per cent.

In the farming sections where boys are needed in the spring more elimination would naturally be expected than in those sections where children are not demanded for work. Another factor which greatly affects the school attendance this year is that of Spanish influenza. This presented a very abnormal condition in some sections. Many local boys, who were required to remain at home to assist their fathers in the spring farm work, are carrying their required six months' supervised practical work under the supervision of the vocational teacher. This would not be true if the boys' home farms were more than 15 miles distant from the school. Hence, the greater effectiveness in vocational agricultural instruction with pupils who are living a reasonable distance from the school rather than with boys who are boarding, and when returning home before the close of the school to assist in farm work are beyond reach of supervision by the agricultural teacher.

The number of students living in dormitories and consequently beyond the immediate influence of the school when at home is a negligible quantity. This is shown in two ways: (1) By the small representation from counties outside of the county in which the school is located, and (2) by the fact that only three of the schools provide dormitory facilities.

Course of study in the district agricultural schools.—Only two courses are offered in the district agricultural schools—the general or science course of four years and the four-year vocational agricultural course. These courses are uniform for all the schools and are adhered to closely. There is, however, an unnecessary repetition of agricultural instruction in that all pupils before reaching these schools are required to take a prescribed general course in agriculture in the seventh grade. Those pupils taking the science course in the first year are again required to take a half year of elementary principles in agriculture, using a general textbook of the same class as that used in the seventh grade. The boys are required to take farm shop and the girls domestic art twice a week throughout the year. The agricultural work of the first year science course also calls for home and school gardening. This practical work in agriculture, including farm shop work, parallels the first year's work of the vocational course in agriculture, where the boys are required to take during their first year of southern field crops and principles of bookkeeping and farm accounts.

On examining the character of the agricultural instruction in each of these courses it has been found that many boys elect the science course, because they get at least two years' work in agriculture without being required to do any supervised practical work for at least six months, and still receive the same school credit. This explains in a large measure the small percentage of enrollment of boys in the vocational course. Latin is taught in some of these schools, but is in the process of elimination.

A representative class schedule of one of these schools is as follows:

Daily schedule of the fourth district agricultural school.

Hour.	Mr. Williamson.	Mr. Nichols.	Miss Wideman.	Miss McNeill.	Miss Hale.
8.15- 8.30		Devotional	Devotional	Devotional	Devotional.
8.30- 9.10	Latin III	Nonvoc. Agr. I, Bot. I.	Chemistry IV	English II	Dom. Arts II.
9.10- 9.50		Nonvoc. Agr. II, IV.	Geometry III	English I	Dom. Sc. II.
9.50-10.30	Physics III	Voc. Agr. I		Spelling I, Comp. I	Dom. Sci. II.
10.40-11.20	Latin II	Voc. Agr. I	Geometry IV	English III	Dom. Arts I.
11.20-12.00	Latin I	Voc. Agr. I	Geometry II		History IV.
12.30- 1.10	Latin IV	Voc. Agr. II	Algebra I	History III	History II.
1.10- 1.50		Voc. Agr. II	Algebra II	Comp. III	
1.50- 2.30	Geometry III	Voc. Agr. II	Arith. I	Comp. II	English IV.

There is at each school a vocational teacher of agriculture who devotes three periods daily to each of two classes. The balance of his time, or about two periods a day, is devoted to teaching nonvocational agriculture in the science course.

The three years of science in the vocational course is taught by three different teachers and must of necessity lack coherence and a proper correlation with vocational subjects.

Material equipment of the schools.—1. Buildings. The school buildings at Hamilton, Albertville, Abbeville, and Wetumpka are quite satisfactory for the purpose intended. The school buildings at the other places are more or less makeshifts so far as provision for vocational work is concerned.

At least one room has been set aside for vocational agricultural instruction at each school. These rooms are of the combination laboratory and recitation type and are supplied in the majority of cases with very satisfactory furniture, consisting of flat-top tables with drawers, and recently constructed filing cases. All the classrooms may be used and are used for laboratory work in soils, farm crops, and horticulture.

The striking thing in connection with the investigation of the equipment and facilities for carrying on agricultural instruction is that prior to this year the schools had provided practically no laboratory equipment. There is every evidence that in the past the agricultural instruction in these schools has been of the most bookish kind.

Not until this year have the schools been required by the board of control to set aside any definite amount for the purchase of equipment which would be in any sense adequate to carry on agricultural instruction. With the introduction of vocational agriculture this year they have been required to set aside $300 for laboratory equipment and $100 for maintenance. Uniform laboratory equipment, including illustrative materials, is provided for in agricultural schools and in county high schools that have introduced vocational departments of agriculture.

The libraries in the schools at Hamilton and Blountsville were burned with the school buildings and have never been replaced. All general libraries in the other seven schools, with the exception of three, might as well have been burned so far as their daily use is concerned. This feature of the schools has been woefully neglected. However, each school has complied with the requirements of the State board for vocational education in securing the required reference books bearing directly upon agriculture. Each school has, with the exception of three, provided itself with a good supply of bulletins issued by the State experiment station and the United States Department of Agriculture. Practically all the schools have carried out the instructions of the State supervisor of agriculture in cataloguing these bulletins so as to make them readily available for instructional purposes. Each school has provided the required list of current agricultural publications. These amount to approximately six for each school.

Only two schools have made any real provision for science instruction. In four of the schools there is practically no science laboratory space, much less any equipment. This feature of the schools is very poor. Here again, these schools, so far as equipment for science instruction is concerned, are not on a par with the county high schools.

Summary needs of material equipment.—Libraries, laboratories, and other classrooms, suitable for the study of agriculture, and the various sciences related thereto, should be given emphasis in this type of school. The school should assume the responsibility for a well-rounded education of the pupil in all matters pertaining to agriculture and country life. Classrooms and laboratories should be adapted to the special purposes of the school. Equipment for the classrooms should be selected because of its adaptability to training in agriculture. Submitted to the test of practical farming much of the equipment usually found in the science laboratories in these schools would be omitted, and other equipment would be selected. Running water and gas of some form should be required in all of these schools.

2. *School farms.*—The following table will indicate to some extent the area and use of the school farm:

TABLE 41.—*Land used for instruction.*

School.	Land owned by school (acres).	Land used for for instruction (acres).	Purpose.
Wetumpka	80	9	Revenue.
Abbeville	47	10	Do.
Evergreen	8	6	Do.
Jackson	30	5	Do.
Athens	150	10	Do.
Blountsville	72	30	Do.
Albertville	70	4	Do.
Sylacauga	40	5	Do.
Hamilton	80	6	Do.

The answers to the question, "Do you require supervised work on the farm?" are given below:

Wetumpka: No. Only those who have vocational projects on the farm have supervised practical work there. Formerly all male pupils did some practical agricultural work.

Abbeville: No. Only plot experiments and variety tests done by the farm superintendent under direction and used as a demonstration and for note taking.

Evergreen: Yes. This work is in the construction of fences, poultry houses, self-feeders for hogs, hotbeds, cold frames, and garden work. Each boy worked about two periods per week (one and one-half hours all at once) at this.

Jackson: Yes. First assistant takes boys two hours each week. General farm work.

Athens: Yes. Projects. Each vocational student has one or more projects. (Note: An error in returns.)

Blountsville: Yes. We require the vocational boys to have group projects which are conducted on farm and supervised by teacher of vocational agriculture.

Albertville: Yes. We started in the fall to require two hours per week on the farm from all nonvocational students (boys), but influenza and other troubles hindered this program. We have done whatever farm work was needed, but not as systematically as I had planned.

Sylacauga: No.

Hamilton: Yes. Three acres crop rotation. Five acres orchard project. One-eighth acre flower garden. One-fourth acre tomato growing.

It is quite evident from the above table that the school farm is utilized to a very limited extent for teaching purposes. It affords, in some cases, an opportunity for landless boys enrolled in the vocational course in agriculture to meet the requirements of the six months' supervised practical work. Strange to say, these boys as a rule are from the neighborhood in which the school is located and not necessarily boys who are boarding, and therefore from a distance.

In some cases the school is used to give pupils practice in farm carpentry. In three schools only is the agricultural instruction of the school to any extent correlated with work on the farm.

To show the inadequate equipment of these schools for instruction in live stock, including work in animal husbandry, dairying, and poultry, the following data are given for each school:

Abbeville: Eighteen Duroc hogs; 2 mules. (Hog pasture being broken at time of visit and hogs to be sold.)

Wetumpka: Eight Duroc hogs; 2 mules.

Evergreen: One horse; 13 Duroc hogs; 12 head of poultry.

Jackson: Two mules; 9 hogs.

Sylacauga: Two mules; 12 hogs; 14 head of poultry.

Albertville: Two mules; 2 bulls; 1 calf; 6 heifers; 5 hogs; 29 small pigs.

Athens: Four mules. (Farm rented.)

Blountsville: One horse; 1 mule.

Hamilton: Two mules; 1 bull; 2 hogs; 28 head of poultry.

The farm buildings are poor, and very few are suitable for demonstration purposes. None of the barns have anything about them of educational value. In most cases they are nothing more than mere shacks.

At only two schools is there farm machinery which is not commonly found on the poorest farms of the district. There are, of course, reasons for this, chief among which is the character of the farm; or in some instances the land is too rough for the employment of modern machinery. One noticeable thing about the farms is the lack of care of farm machinery.

Only four out of the nine schools have orchards. This lack of orchard facilities is a serious handicap to instruction in horticulture. Each school, however, has prepared different kinds of hotbeds and cold frames for the purpose of growing sweet potatoes, tomatoes, etc., for use on the farm as well as, in some cases, for commercial purposes. So far as the evidence goes, the hotbed work at the schools is a new enterprise. This is work that may be carried on successfully in any school where a qualified teacher of agriculture is provided. At three of the schools an attempt has been made to set out an orchard and at others pupils have been given practice in renovating the existing old orchard on the farm.

Summary on farm practice.—The school farm should be as good as any to be found in the district and land suited to the various farm crops and animals which can be produced in the district. The reasons for this are obvious. It should be the aim of the school to establish the highest of production—that is, it should undertake to show pupils what farming is at its best. Such a policy fits into the home-project idea of vocational agricultural instruction, because boys whose home farms are producing inferior crops and animals will have standards by which their home products may be gauged, and the improvements they make from year to year may be measured. High standards thus may become not discouraging but encouraging factors in the training of the pupils.

The school farm should not be a fancy farm—a farm where money is spent and not a farm where money is made—that is to say, the equipment should be modern and varied, but of the kind that the most practical farmer would choose. Such buildings as barns and poultry houses should be of the kind that a farmer with a moderate amount of capital would wish to erect as parts of a convenient, sanitary, and practical plant. Quarters for all kinds of live stock suited to the locality should be provided. The school might or might not own all of the live stock dealt with in classroom demonstrations. The best obtainable specimens of the breed studied should be seen and handled, and proper accommodations for keeping them should make it easy to borrow or hire animals when needed.

Little opportunity is provided for visiting fancy farms for purposes of observation. It is, therefore, highly desirable that these schools should provide the best models of buildings, implements, machines, and animals for use in economic and profitable production.

Use of school farm.—The principal practical use of the school farm has been to afford facilities for doing practical farm carpentry, such as making gates, hog houses, poultry houses, concrete forms for underground drainage, hotbeds, etc. Pupils have been given practice in pruning and spraying the school orchard, where it existed, running terraces, and inoculating hogs. Only in two schools was it found that the school farm was used for group project work, that is, where a certain number of pupils are given the problem of renovating the school orchard, caring for the hogs on the farm, and running the bean or tomato project, etc.

Only in those schools where pupils were enrolled in the vocational course in agriculture and without access to land were pupils given individual projects on the school farm. Thus, only 85 acres of the total number of acres in all the school farms have been used for individual supervised practical work in agriculture during the year. The conditions under which the schools are now operating enables the vocational pupils almost without exception to live at home and carry on their required supervised practical work in agriculture on the home farm.

With the exception of a very few pupils, all are required to do some kind of supervised practical work in agriculture on the home farm for at least six months. The same requirement is made of pupils in vocational departments in county schools, so that, with the limited number of landless pupils in the district schools, the school farms, so far as their use is concerned, are of little educational value.

The same practice is followed in these schools as is followed in the county high schools in utilizing the teaching materials in the community for class instruction in agriculture. For example, farms in the immediate vicinity of the school are used to teach pruning and spraying of orchards, running terraces, inoculating hogs and cattle, building storage pits for sweet potatoes, treating wheat and oats for smut, etc.

Methods of teaching in the district agricultural schools.—All the schools are using the textbooks prescribed by the State. So far as agricultural instruction is concerned a seasonal sequence of topics in the book is followed rather than a logical sequence. The textbooks, therefore, in all the schools but two, are used mostly as references.

All reference books in agriculture required by the State board for vocational education and catalogued bulletins serve to supplement the textbook. These are used in connection with a systematic study of the supervised practical work which is outlined in advance by the teacher. The project study outline method of instruction is followed by six out of nine schools. This method of instruction compels the pupil to use rather extensively available reference materials.

Although the State board for vocational education has required each of these schools to secure certain illustrated materials for teaching purposes, it is evident from the inquiries and observations made that so far little use is made of such materials.

Virtually no attention has been given in the schools by the teachers to outlining in advance a series of practical laboratory exercises to be followed by the pupils. Some of the more progressive teachers have attempted to work out as the classes progress a series of exercises from different laboratory manuals.

Little attention has been given in these schools to this phase of instruction. This is probably one of the greatest weaknesses in the instruction, as planning instruction and practical work in field crops and soils lend themselves easily to a study of the biology of plants, including considerable agricultural botany, injurious insects and their control, implements and their use, plant foods, and feeding.

In connection with the instruction in animal husbandry splendid opportunity for correlation is afforded in relating the work to the biology of animals, problems of hygiene, sanitation, buildings, and equipment—kinds, cost, plans, etc.

All the schools are following the requirements of the State board for vocational education in keeping certain records, such as—

1. An agreement between the pupil and the parent relative to facilities for carrying out at least six months' supervised practical work at home.
2. Preliminary statement of vocational work, which lists the names of the boys enrolled in the vocational course, their ages, course of study pursued, the kind of project engaged in, and its scope.
3. A monthly report of methods of instruction to the State supervisor of agriculture.
4. Cash and labor records used by each pupil carrying on a supervised practical piece of work.
5. Summary of financial statement of the practical work at home.

These records are kept on file in good form at the school. Such records are common not only to the agricultural schools but also to all county high schools approved for Federal aid.

Summary of instruction.—So far as supervised practical instruction in agriculture is concerned, the methods of instruction by supervised visitation of home projects are uniform for both agricultural schools and for county high schools.

Lantern slides and charts, prepared by experts, lending themselves to vivid presentation of facts and principles of vital concern to practical farming are now available in great abundance. They may be bought or borrowed by any school; but they are not utilized by either agricultural schools or county high schools.

The principal of the agricultural school has control over all teachers and should see to it that methods of instruction are used which give each pupil a well-knit body of knowledge through the closest possible correlation of the subject studied with the interests and activities of efficient farming and well-balanced country life.

The agricultural school laboratories and shops should offer advantages superior to those of the county high school for group methods of instruction.

The supreme problem of this type of school is to adopt methods of instruction which shall insure model farming at the school, and at the same time make this a means to the best possible farming by its pupils at their own homes. In working out this problem the distant home must have equal consideration with the home that is near.

Extension work in the agricultural schools.—The schools have no organized relationships with the State agricultural work. The agricultural teacher in almost every school has for a very brief time assisted the county agent in organizing clubs. There is no attempt at using the agricultural teachers to supervise club work. As a rule, the agricultural teachers have a sufficient amount of work in connection with their regular vocational duties to keep themselves fully employed. Their work falls into three main divisions, some of which take on forms of extension work: (1) Regular class and laboratory instruction; (2) field work for observation and instructional purposes, such as pruning and spraying trees, home mixing of fertilizers, running terraces, treating cereals for smut, selection of seed; and (3) responding to demands made upon them by farmers for help in solving some of their troublesome problems. There seems to be no direct relationship between the agricultural school and the teaching of agriculture in the elementary schools of the county or district.

In two of the nine schools there was practically no cooperation with the farmers of the community. In the other seven schools the agricultural teachers have been called upon, more or less, by farmers to assist them with some of their problems. The school farm is used to some extent to carry out practical farm demonstrations in small grains, cotton, and truck crops. Some of the schools have been instrumental in bringing about fall plowing, the growing of cover crops, furnishing the farmers with bulletins, inoculating hogs, buying fertilizer and seed cooperatively, and renovating orchards. All this work applies to the immediate community in which the schools are located and is work which any vocational department of agriculture in a public high school may perform.

In a few places the county agent works through the school in the promotion of clubs and in their general county-agent work. There is, however, no organized machinery for systematic cooperative relationships between the school farm, the agricultural teacher, and the county agent.

In only one school was there any indication of cooperation between the school and the farmers' organizations, and in this case the agricultural teacher is president of the Swine Breeders & Live Stock Association. By this means the school has been instrumental in introducing better types and breeds of live stock into the community.

The broad obligations of the district agricultural schools, with reference to the work of their agricultural activities, should be as follows: Members of the school staff and especially the agricultural teachers, working in cooperation with the county agents, should investigate farm and market conditions for the purpose of advising individuals and organizations with reference to better business methods among the farmers and more satisfactory methods of marketing farm products. They should also give instruction in the organization of cooperative enterprises, and should perform any other work calculated to promote the agricultural or rural development of the territory represented by the school. It should be the duty of the school staff to keep in touch with and to bring to their assistance all agencies in the State or Nation that would enable them to utilize the latest and best knowledge in the furtherance of their work.

Agricultural instructors: Their qualifications.—The prevailing standard qualification for agricultural teachers in these schools is graduation from a four-year agricultural course in a State agricultural college. In view of the foregoing discussion of the courses of study and the function of the district agricultural school it will be evident that its teaching staff should be radically different from the staff of a county high school. The county high school has a twofold aim, in that it admits some pupils whose life purpose is farming, and other pupils with various other purposes; whereas the agricultural school should admit only those who desire to prepare themselves for better farming. Just here is where the agricultural schools and the county high schools are overlapping, as their aim at the present time is one and the same. Nevertheless, the qualifications of the vocational teacher of agriculture in a county high school are of the same general nature as those of the vocational teachers of agricultural projects and related studies in an agricultural school.

Administration of the agricultural schools.—In three of the agricultural schools the principal is also vocational teacher of agriculture. In all nine schools the principal is manager of the school farm. In six schools the agricultural teacher has no responsibility for the farm. He acts only in an advisory capacity to the principal. On the contrary, the principal should be selected because of special qualifications for service as adviser to the board of control in the administration of the type of education the school represents; and the vocational teacher of agriculture should be chosen because of his appreciation of the requirements of vocational education, and his special qualifications for bringing education to bear on the training of pupils for school and home farm work.

The principal is responsible for all instruction given, and the efficient conduct of the school, and for making the records and reports required by the board of control as well as for records and reports required by the State board for vocational education. The latter is a new requirement.

The State provides a competent State supervisor of vocational agriculture. It is the duty of this supervisor to assist teachers to improve their methods of instruction and to organize their material for teaching purposes. He prepares outlines and publications bearing directly upon methods and materials on instruction in vocational agriculture. He also brings the teachers together from time to time for conferences. The same provision should be made for supervising nonvocational subjects.

The schools are conducted directly by the executive committee of the State high-school commission. The local people look upon the schools as State schools and refer to the farms as State farms. With very few exceptions the local community manifests little interest in agricultural schools except as schools adapted to furnish general high-school education. In no case does it appear that the county superintendent has established any direct relationship with these schools for educational purposes.

Summary of agricultural schools.—There are nine agricultural schools in Alabama, with two of these schools in the seventh congressional district. The law establishing the schools was passed on February 28, 1889. Entrance is based on completion of a 7-year elementary school course. All schools admit students from outside of their respective districts. About 3 per cent of the pupils board at the school, and are, as a rule, from 1 to 3 years older than pupils in corresponding classes in town high schools. The course of study covers a period of 4 years of 9 months each. The schools are coeducational There is no age limit for admittance. Each school receives support from the State in the sum of $4,500 a year. The total income for 1918 from all sources was $67,536 for all the schools.

The number of acres used for instruction is approximately 85.

Farm animals included 17 mules, 2 horses, 6 cows, 67 hogs, 52 fowls, 3 bulls, and 1 calf.

Board, room, light, and heat cost each student from $16 to $20 a month in private homes, and from $10 to $12 in schools with dormitory facilities, where the farms supply the dormitories with farm produce.

Books cost from $10 to $12 a year for each pupil.

Productive labor is not required of pupils except in two schools. Students, however, find opportunities for work at 15 to 20 cents an hour.

Military training is not a feature of any of the schools.

Piano instruction is available in practically all of the schools. Every girl is required to take one year's work in agriculture and four years' work in home economics.

Little attention is given to purchase of registered stock to improve the school stock and to service to the farm community.

Few of the schools rely upon their shops for repairing, plumbing, wiring, carpentry, and concrete construction, and other needed work. Where the opposite policy is followed the shop work grows primarily out of the needs of the school and teaches the boys to be self reliant on their own farms.

Six of the agricultural schools not functioning in the State system.—1. At Athens the school is in competition with a private boarding school for boys; the farm is rented, and therefore of little practical use as an educational factor; the school lacks facilities for correlated science work and has not reached the rural people except in a small way, and that only in the county in which the school is located.

2. The school at Jackson is in no sense adapted to the needs of rural people. Investigation shows that time never was when the people of this district showed any interest in this school. The equipment is very inadequate for carrying on the work, and in the past the local people have been opposed to the agricultural teacher working with the surrounding farming communities.

3. At Abbeville the work is at a very low ebb, due to lack of interest on the part of the town and countryside. It is common talk about Abbeville that the local people have no interest in this kind of education. It was reported that a physician is interested in seeing the work discontinued, so that the building might be used as a hospital. An interview with a patron, and for a long time the agricultural teacher

in this school, shows that the agricultural side of the school is not functioning in the promotion of agricultural education in the county or district.

4. A glance at the course of study offered by the agricultural school at Sylacauga shows that the school is not designed to prepare young people for rural life. The school is located in makeshift quarters and in a town sufficiently large and prosperous to have a good high school of its own, together with a vocational department of agriculture if the local people so desired. There is practically no provision at the school for correlated science work. The farm equipment, including buildings, is very inadequate.

5. The school at Wetumpka is a town school, located geographically in the wrong place. The school has never been anything but a local school. There is little excuse for continuing to aid it as an agricultural school, as it is neither congressional in its representation of students, nor agricultural in its organization and equipment.

6. The school at Evergreen has a poor plant and only a few acres of land. The equipment likewise is indifferent. This school is at the present time accomplishing good work in spite of these handicaps because it is in charge of an efficient principal. This, however, is probably a passing condition and may be considered as giving the school a new lease on life; but it can not become permanent because the school lacks all material equipment necessary in a well-equipped agricultural school.

Three satisfactory agricultural schools.—(1) On the contrary, the school at Hamilton has been unique in its work among similar schools in the United States. It has throughout a number of years selected the most promising boys of the country and set them on their way to better farming and to higher education in agriculture. This school has a record which is enviable among schools of this type in the United States. The school building is evidence of large interests on the part of this district in this type of educational work. The enrollment of boys has been most satisfactory.

(2) The school at Albertville is unique in its location on Sand Mountain. The enrollment of boys and the provision for instruction in agriculture in this school, as well as the interest manifested in the school by the people, is sufficient reason for this type of work in this section of the State.

(3) Investigation shows that no section of the State is in greater need of an agricultural school than is the section in which is located the agricultural school at Blountsville. Although the school buildings have recently been burned to the ground, the local people of the district have rallied to its support in a most remarkable way. They have given their personal notes for large sums to replace the school and to continue the work. The spirit of the people in this section

of the State is of the right kind for the development of an agricultural school of less than college grade.

What the Alabama agricultural schools ought to be.—The agricultural schools of Alabama should be planned to meet the real needs of the people to furnish a practical education to all young people of whatever degree of preparation for at least a six-months term. The schools should not be planned as preparatory schools for the university or the agricultural college. They should be well equipped and have not less than 150 acres of good agricultural land each. They should be well stocked with cattle, mules, and horses, and have such other stock as would meet the needs of the school's particular section of the State. The schools should plan their work for 12 months of the year, making provision for two six-month terms. Young men and women of ability should be enabled to pay a good part of their expenses at these schools by the labor of their own hands, and so prepare to go back to the land in Alabama with a technical and practical knowledge of farming, such as is not now procured in the district agricultural schools.

If the Alabama agricultural schools were reorganized on this new foundation, they could no longer, as now, be utilized as local high schools; neither would they in any sense compete with the county high schools.

The committee is convinced that the State should maintain six agricultural schools at a cost to the State of not less than $20,000 per annum for each school. . The six schools should be located or relocated by the present board of control of these schools or the executive committee of the present agricultural schools. It is understood, of course, that the present schools as well as new sites may be considered by the locating board. The essential thing is to locate the six proposed schools at strategic centers over the State.

II. THE COUNTY HIGH SCHOOLS.

History of organization.—Up to the year 1907 there were no public high schools in the State except as attempts had been made to evolve them here and there as a part of the school system of various cities. There had been and were then successful high schools in portions of the State, but they were private or denominational. A boy or girl living in the country, or in any except a few of the larger towns, had to secure high-school training in private schools.

The State Assembly of August 7, 1907, passed a law which made possible the esablishment of a high school in each county of the State. Under this law, a high-school commission, consisting of the governor, the State auditor, and State superintendent of education, was appointed to locate the schools.

The minimum requirement as a condition precedent to the establishment of a county high school has hitherto been five acres of land

and buildings with a valuation of not less than $10,000. These high schools receive an annual appropriation from the State of $3,000, and additional funds for maintenance from county boards of revenue and from an enrollment fee of $2.50 per pupil for each half year.

In order to qualify for Federal aid for vocational agricultural instruction the State board for vocational education has required each school to make available 10 acres of land for school project work, to provide a classroom with agricultural laboratory equipment worth $300, and an annual sum of $50 for maintenance. The agricultural teacher must meet certain requirements in training and experience, and if he devotes his whole time to teaching vocational agriculture the school is reimbursed for half of his salary from Federal funds.

Teaching staff of the county high schools.—The minimum number of teachers employed in any county high school is three; but the number is largely determined by the income of the given school. For example, the Jefferson County high school has a staff of 10, all of whom are college graduates. The returns on the questionnaire for these schools showed a higher average training of the faculty in the county high schools than in the agricultural schools. The salaries of the teachers range from $540 to $2,400. The average salary of teachers of academic subjects in the county high schools is slightly above that of the agricultural schools.

Vocational departments of agriculture.—This new work of the county high school enables it to orient its work more definitely with agriculture, the principal industry of the State. The teacher of vocational agriculture is chosen because of his liking for country life, his demonstrated ability in practical farming, his salutary influence upon boys and young men 14 to 25 years of age, and his special qualifications for teaching and supervising practical farm work.

The instructor of agriculture is responsible for the conduct and efficient agricultural training of the pupils in his department. The agricultural instructor at present is permitted to teach two periods a day, on an average, of nonagricultural subjects.

The general influence of the vocational department of agriculture in the county would be materially increased by the appointment of an advisory committee composed of practical farmers from the school community.

Enrollment in the county high schools.—Another page gives a comparative statement of the enrollment in the county high schools and the district agricultural schools.

These schools are organized as county schools, although in most cases they draw students from two to five different counties. This is especially true of the county high schools which offer instruction in vocational agriculture.

How the county high schools are located.—The problem of locating a county high school is much simpler than the problem of locating an agricultural school. This will be evident from the following considerations: County high schools have flourished best wherever they have been most successfully identified with the agricultural interests of the county and wherever they are easily accessible by reason of good country roads. The State board for vocational education requires that each county high school provide 10 acres of land in order to qualify for Federal aid for agricultural instruction. The investigation goes to show that 10 acres of land is a handicap or liability rather than an asset in the development of vocational work. This is true because 10 acres of land, or 5 acres of land, is of no value to the school unless there are means provided for the operation and management of the land. Schools that depend upon local farmers to assist in the work of the school farm have failed. There is no place for a school farm unless the school provides adequate facilities for working the land.

Under the operation of the Federal act for vocational education the practical work in agriculture by pupils may be studied at the school and put into practice at their own homes or at the homes of other practical farmers in the vicinity of the school. Illustrative material and practice work may also be found at neighboring farms.

One high school has a poultry plant, and the agricultural department makes good use of it. Another has a greenhouse, which is operated by the vocational pupils without any assistance from local farmers.

Equipment of the county high schools.—One might expect a radical difference in the requirements for equipment in county high schools and the agricultural schools; but, as a matter of fact, so far as laboratory equipment for vocational work in agriculture is concerned, they are the same.

The school farm.—Unless the present 10 acres required by the State board for vocational education are utilized to better advantage than at present, the requirement might just as well be eliminated altogether. The reasons for this are that farm products, methods of production, farm buildings, and equipment may be studied on farms in the vicinity and at the homes of the pupils. Though a high school may have a greenhouse and its agricultural department make good use of it, it is quite possible to give excellent instruction without any greenhouse at the school, if cooperative relations are established with owners of greenhouses in a section where market gardening is an important branch of farming.

Practice work under economic conditions is proving better than practice work under school conditions, provided the practice work in the former case is given proper educational value by study at the school, in the greenhouse, and elsewhere, of all factors involved in the production and marketing of greenhouse crops. The same principle applies to growing plants other than those grown in greenhouses. Efforts are being made at some of the schools to grow fruit trees on the school premises, in charge of the pupils in the vocational department. These trees will afford practice work from season to season in connection with the various processes of propagation, pruning, spraying, thinning, picking, packing, and marketing. Fruit growers, live-stock growers, and general farmers, however, are willing to cooperate with the agricultural instructors in affording pupils practice work.

The vocational department of the Walker County high school is working in cooperation with a project located near the school grounds. The aim of the project is to grow plants for the market. One thousand five hundred bushels of sweet potatoes are to be bedded this season by the pupils of the high school. From these it is expected to grow approximately 12 to 15 million potato plants, which will be pulled and marketed largely by the pupils of the school. This project is operated on a commercial scale for the purpose of securing funds with which to purchase libraries for the schools in the county. Similar work will be conducted in connection with tomatoes, beans, etc.

Jefferson County high school is provided with a good farm and good equipment. It has secured pure-bred live stock from Wisconsin and is in a position now to do creditable instruction in live-stock management.

The courses of study.—The courses of study in the county high schools have been outlined briefly by the department of education. They cover four-year courses in agriculture, Latin, modern languages, and general science. There has been no attempt at adapting the four-year course in agriculture to the needs of part-time pupils in day classes and to the needs of adults in evening classes. The vocational course in agriculture is identical with the course given in the agricultural schools.

Substitutes for home projects are accepted for boys who have had no farm experience. These boys, for example, may be employed on dairy farms, with the privilege of attending dairy classes and keeping records of one or more cows or one or more crops. Dairy projects and substitutes for projects rarely occupy the entire work time of the pupils.

Farm shop work is required in the county high schools as well as in the agricultural schools. Hotbeds, cold frames, farm gates, poultry houses, and brooders are made. The agricultural instructors teach the boys a variety of projects in farm shop work. The success of this phase of the pupils' training depends in no small degree on the mechanical skill and ingenuity of the agricultural instructor.

A healthy indication that the county high schools are becoming genuine rural high schools is that the largest enrollment of pupils is in the science course, with the enrollment in the vocational course as second.

The study shows that the county high schools maintain school gardens in which students of the general science course do all the work of preparing the soil and growing the crops. The school gardens grow all the common varieties of vegetables and, in some cases, many varieties of flowers and shrubs. This is real seventh-grade work. The advantages of the school garden may be briefly indicated as follows: (1) It offers relief from the routine of the schoolroom and keeps the pupil in the fresh air and sunlight; (2) it teaches, in connection with class and laboratory instruction the composition and care of soil, the best conditions of plant life, the value of fertilizers, seed selection, etc.; (3) it develops the sense of ownership and respect for property—in the care of their own plats pupils fight common-plant enemies and learn that a noxious weed and a neglected plat may make trouble for others; and (4) it promotes a pleasant avenue of communication between the school and the home, relating them in a new and living way, thereby strengthening the public interest in the school.

Forms of community service.—A limited number of returned questionnaires indicate the ways in which the agricultural teachers of the county high schools serve rural communities. They are—

1. Spraying home orchards and pruning trees of patrons and other farmers.
2. Assisting in planting of cover crops for harvesting, for grazing, and for green manure.
3. Assisting in enlarging the enrollment of the school through the agricultural department.
4. Assisting in beautifying the grounds and campus.
5. Assisting in supervising the home project work of his pupils.
6. Advising the farmers of the community with their crops, fertilizers, insect pests, crop rotations, etc.
7. Cooperating with the farm demonstration agent and the home demonstration agent.

The county high schools are established to care for all the people. Yet there is little evidence to prove that they accomplish this end, outside of the vocational instruction in agriculture. The schools should perform a work broader and more far-reaching than the mere hearing of recitations. All classes of citizens should be reached and served by them in some way. In order that these schools might be made to function as real rural high schools for the county they should engage in one or more of the following extension activities:

1. *Social.*—Without seeming to meddle, the principal can be influential in procuring the best lectures and entertainments for the town lyceum course; that wholesome educational pictures are secured by the local movies; and that no public event shall pass without serving to promote the general educational interests of the community.

2. *Vocational.*—County teachers' meetings may be held at regular times in the school buildings to promote professional training The teachers of these schools should pay frequent visits to rural schools, and give demonstrations of work important to both pupils and patrons. The entire resources of the school should be used to improve education in the county. Such activities as home gardening, milk testing, canning on the home premises, inoculating hogs against cholera, live stock judging, the spraying of trees, incubating, and other work with poultry, and supervised work in agriculture at home will bring school life and home and business life into closer union. This work can be made more successful by securing the definite cooperation of rural teachers. One rural school might concentrate its activities upon home gardening, another upon farm carpentry, another upon domestic science and domestic arts.

3. *Health and sanitation.*—It is especially suggested that the county high schools provide the country schools with lectures on such topics as Prevention of Diseases, Causes of Typhoid, Care of the Teeth, Cleanliness in Home and Town, etc. The class work in sanitation should be so practical and the sanitary conditions of the school grounds should be such that the conditions at home, in public buildings, and on the streets would be improved. These schools can improve local conditions through clubs, organizations for community beautification, and general sanitary improvement. An organized campaign against the house fly, more sanitary stores, streets, and yards may well start in one of these schools.

Summary of comments.—Attention should be given to strengthening the course in agriculture given in the seventh grade, where this grade is included in the county high schools. This may be done by securing seventh grade teachers who have had special work in agriculture and nature study. The vocational teacher of agriculture will always be in a position to assist the seventh grade teacher in outlining the work in nature study and agriculture and to teach, from time to time, lessons in agriculture and to organize the boys of the seventh grade into junior home project work. By thus strengthening the seventh grade work in agriculture, agriculture can be dropped as a requirement in the science course, and all pupils in the county high school should be required either to take the vocational course in agriculture or no agricultural instruction at all.

In the place of agriculture in the science course as it now stands the first year should be given to general science, the second year to biology, the third year to physics, and the fourth year to chemistry.

The qualifications set by the State board for vocational education for vocational teachers in county high schools are identical with those of the vocational teachers in the agricultural schools. All must be graduates of a four-year college course in agriculture with several years of farm experience, together with good requirements in professional improvement.

Specialization among vocational teachers of agriculture in county high schools is only possible where the enrollment is large enough to require two or more instructors. As conditions now exist, choice among candidates rests with the man who is qualified to teach the major agricultural subjects in the four-year course as outlined by the department of education. Experience has proved that it is possible to find a few capable instructors of this type. Not college boys but men of maturity are demanded. Now and then a mature man who is not an agricultural graduate, but who has developed the right kind of talent, both in the sense of his practical farming and in his powers of presenting ideas in connection with farming, may qualify for an instructorship in part-time and evening class work.

For the first time there will be a special summer course this summer at the Alabama Polytechnic Institute for preparation of agricultural teachers in service. This summer work will include technical instruction in agriculture and shop work, together with special courses in methods of teaching vocational agriculture in high schools. This kind of preparation is probably most needed by agricultural teachers in service at the present time.

Specific recommendations.—A casual reading of this section shows that the district agricultural schools are not living up to the specific work for which they were established. They are, as a matter of fact, serving in exactly the same capacity as are the county high schools. It is, therefore, recommended that these schools be disposed of in the following manner:

1. Maintain hereafter only six agricultural schools of secondary rank, to be located at strategic centers over the State as a whole, which location may be at present schools or at new sites.
2. Give these schools an annual State support of not less than $20,000 per annum for each school and reorganize them as genuine secondary agricultural schools.
3. The State aid to county high schools should be increased to a minimum of $4,000, provided that no such school shall hereafter receive any aid from the State which is not duplicated dollar for dollar from county or local funds. More than $8,000 a year is needed to make these schools strong and effective county high schools.
4. While of no immediate bearing on the other State-supported district agricultural schools and county high schools discussed in the present chapter, it is recommended here that the annual State appropriation to the Northeast Alabama Agricultural Institute, at Lineville, be discontinued and the school property turned back to the local community. This is so recommended because the school is purely local and in no sense serves the State.

Chapter XII.

THE CITY SCHOOLS OF ALABAMA.

Definition of city schools.—A city in the State of Alabama is an incorporated town having 2,000 or more inhabitants. It was so defined by the supreme court some years ago, and the definition has been accepted for the purposes of the State school law. A town may at any time take its own census to determine whether or not it is entitled to this classification.

Under this definition there are 46 cities in Alabama. Each one of these was personally visited and its schools inspected by one or more members of the survey committee. The cities differ largely in size, industry, environment, and rate of growth.

Birmingham for example has 200,000 inhabitants and employs 621 teachers, while Bridgeport, at the entrance to Sequachee Valley, has but five white teachers and one colored.

The diversity in the rate of growth of these cities is an element very materially affecting conditions in the schools. Birmingham led most of the cities of the country in the percentage of increase in its population between 1900 and 1910, as shown by the census figures of those years. In Sheffield, and in Anniston, the population has more than doubled within the past two years, due largely to governmental activities during the war, while in several other cities there has been very rapid growth. Quite naturally, it has been hard for these cities to increase their school buildings and school revenue in such manner as to keep pace with this rapid increase in population. On the other hand, the superintendent of schools in one city lives all alone in a large brick building which a receding boom left without other occupants.

It may be observed in passing that there are a number of places in Alabama not classified as cities although they have more inhabitants than many of the places already so classified. Fairfield, for instance, is said to have 9,000 inhabitants. Muscle Shoals has perhaps 20,000 people in its district, but it is organized as a Government ordnance reservation, with schools in no way under State control. Numerous mill and factory districts do not incorporate as cities, although they have the necessary number of people. In most instances, the object seems to be either to evade taxation or to avoid State control.

City school boards.—The cities of the State differ as much in the efficiency and equipment of their schools as they do in size, industries, environment, or rate of growth. The relation of the cities to the State in school matters, however, is largely the same. Birmingham, Mobile, and Montgomery, have largely the same relationship to the State school system as have Prattville, Bridgeport, or Sylacauga. In each instance city school affairs are entrusted to a school board of five members, appointed by the city commissioners, if the city is under the commission form of government, or by the mayor and aldermen, if that form of government prevails. They are appointed from the city at large for a term of five years, the term of one member expiring at the end of each year.

While the law in the case is the same for all cities, in practice there are several modifications. Part of them are caused by special charters and some are merely matters of practice. For instance, the city of Mobile is by charter coincident in territory with the county of Mobile, so far as schools are concerned. Its county board and its city board are one and the same.

Prattville, one of the smallest cities in the State, has the largest school board, the number of its members being 18. This arises from the fact that the city school there is an outgrowth of the old academy, as in many other places in the South. The academy had a board of 13 members, the places being filled by heredity. When the building passed into the control of the city, 5 new members were added. The other 13 continue to hold office with the principle of heredity still in force. These 18 men are said to meet regularly twice each year. Similarly, Selma has a self-perpetuating board of 11 members. Several cities have a quasi official board of colored members for their colored schools. Bridgeport, on the other hand, reports no school board at all. School affairs are administered directly by the city aldermen, with the mayor as president.

Wide diversity exists as to school-board practices. In the larger places the board meets regularly each month and keeps systematic records of proceedings. In some smaller places they seldom meet and appear to keep no minutes whatever.

Under the Alabama State law the city board of education has very little real authority. It can elect a superintendent and teachers, and regulate the internal workings of the school if it so desires, but beyond this it can do little. The course of study is prescribed by the State. Most of the textbooks in the elementary schools are prescribed by the State textbook board, and are uniform throughout the State. The city board gets its State and county money from the county board and its city money through the city commissioners. It can not buy a school site or erect a school building without obtaining the consent of the city commissioners.

These limitations will be discussed more fully under separate headings. However, the committee very strongly recommends that the State law should be so changed as to very greatly increase the powers and duties of city school boards. Specific recommendations on this subject are made elsewhere.

City school finances.—The financial support of city schools in Alabama comes from the following sources:

1. The State school fund.
2. The county school fund.
3. The general city tax.
4. The special city school tax.
5. Fees charged for attendance upon school, variously designated as tuition, matriculation, or incidental fees.
6. Subscriptions or other gifts made by patrons or other friends of the schools.

Taking these in their order, the following explanations may be made:

1. *The State school fund* consists chiefly of what is known as the 3-mill tax, supplemented by certain miscellaneous funds and by certain special appropriations made by the State legislature, amounting ordinarily to about $500,000 each year. The State superintendent apportions this fund to the various county boards of education upon a strictly per capita basis of census enumeration of children, including white and black alike. The county boards of education in turn apportion the money between the county schools and the cities. The law makes it the duty of these boards to so distribute these funds that the districts "may have a school term of approximately the same length."

This leaves to the county boards of education considerable latitude as to this redistribution. As a result, practices differ widely in the different counties. Some boards distribute these funds on a per capita basis as shown by the school census enumeration. If they see fit, they may distribute it upon the basis of total net enrollment in the schools, or on the basis of average daily attendance. In some cases they appear to make merely the best guess they can as to what distribution will best answer the purposes of the law. It is sometimes stated that they "give the county schools what they need or must have, and the city schools what is left." In Montgomery County, on the other hand, the county board gives to the city board the State fund on a per capita basis of census enumeration and in addition gives it half the county fund. The very uncertainty of this process tends to bring city board and county board into antagonism and to increase mutual suspicion.

In any event, the distribution is left to the discretion of the county board. The city board may present its claims and may argue its case, but in the end it must take what the county board gives it. However greatly the county board may desire to do the best thing, there is always the possibility that it may change its mind as to what that is. As a result, the city board has no way to tell from year to year what amount it will receive from the State. Even when the time comes to make contract with the teachers for the coming year, the city board is still unable to find out even approximately how much money it will receive from the State. The disadvantages of this situation are obvious.

2. *The county school fund* consists of the proceeds of a tax which may be levied for school purposes by vote of the people on the assessed valuation of all the property in the county up to 4 mills. Of this amount, a 1 mill tax may be levied by a three-fifths vote of the people and a 3 mill tax by majority vote. This sum is supplemented by poll taxes, dog taxes, and certain other funds. The entire county school tax goes into the hands of the county school board and is distributed by them. The distribution of this fund is left to the discretion of the county board, just as is the distribution of the State fund, and is attended with the same difficulties and the same degree of uncertainty.

3. Each city in the State may by vote of its citizens levy a *general city tax* up to 5 mills, for general city purposes, including those of the schools. From this the city commissioners may give to the school whatever sum they desire to give or feel that they can spare for school purposes after the other expenses of the city government have been met. Gadsden by special charter levies a 10 mill tax, of which 2½ mills must be placed to the credit of the school fund.

The following table is based on the State superintendent's report for the year 1917–18 and shows the amount of money which the cities of the State expended upon their city schools, with the per capita of such expenditure for every pupil enrolled during the year and also for each pupil in average daily attendance:

TABLE 42.—*Expenditures by the cities for schools.*

Cities.	Total net enrollment.	Average attendance.	Total cost of maintenance.	Cost per capita on enrollment.	Cost per capita based on average daily attendance.
Alabama City	1,180	615	$10,915	$8.64	$16.57
Albany	1,562	974	24,613	15.76	25.26
Alexander City	735	460	9,810	13.35	21.33
Andalusia	720	551	11,231	15.60	20.38
Anniston	3,480	2,410	38,714	11.12	16.06
Atmore[1]	....	....	....	....	....
Attalla	728	310	8,631	11.86	27.84
Bessemer	4,100	2,524	59,832	14.59	23.70
Birmingham	30,287	20,977	623,980	20.60	29.75
Brewton	578	563	9,083	15.71	16.13
Bridgeport[2]	360	143	2,833	17.87	19.80
Cullman	502	400	8,032	16.00	20.00

[1] Not listed as city, 1916–17.

[2] Figures for 1916–17.

TABLE 42.—*Expenditures by cities for schools*—Continued.

Cities.	Total net enrollment.	Average attendance.	Total cost of maintenance.	Cost per capita on enrollment.	Cost per capita based on average daily attendance.
Decatur	717	585	$13,392	$18.67	$22.89
Demopolis	538	463	10,185	18.92	22.00
Dothan	1,622	1,092	27,731	17.09	25.40
Enterprise	498	379	5,500	11.04	14.51
Eufaula	722	400	8,940	12.39	20.32
Florala	524	269	6,987	13.33	25.96
Florence	1,445	640	16,995	11.76	26.55
Gadsden	2,794	1,768	34,611	12.38	19.57
Girard	679	386	10,118	14.90	26.22
Greensboro	291	215	5,203	17.87	24.20
Greenville	580	437	9,039	15.57	20.68
Huntsville	1,518	1,035	25,735	16.95	24.86
Jacksonville	318	211	5,542	17.42	26.26
Jasper	649	402	8,719	13.43	21.68
Lanett	1,527	1,180	22,165	14.51	18.78
Marion	324	222	6,998	21.60	31.52
Mobile	7,339	5,390	[3] 209,100	28.49	38.79
Montgomery	6,151	4,710	127,270	20.69	27.02
Opelika	902	629	16,461	18.25	26.17
Ozark	634	480	7,705	12.15	16.05
Phoenix	504	341	6,702	13.29	19.66
Piedmont	450	285	6,489	14.42	22.77
Prattville	672	562	6,452	9.60	11.48
Roanoke	929	576	11,907	12.81	20.67
Russellville	308	219	4,017	13.04	18.34
Selma	2,221	1,708	45,769	20.60	26.79
Sheffield	1,002	716	10,848	10.83	15.15
Sylacauga	478	278	5,353	11.20	19.25
Talladega	1,155	793	16,599	14.36	20.93
Troy	1,250	726	22,662	18.13	31.21
Tuscaloosa	2,363	1,411	39,195	16.58	27.78
Tuscumbia	781	597	11,279	14.44	18.89
Tuskegee	342	216	5,110	14.95	23.66
Union Springs	497	346	11,372	22.88	32.87
Total	86,956	61,687	1,589,104	18.27	24.74

[3] Includes a bond of about $50,000.

4. Each city may by vote of its citizens levy a *special city tax* up to 3 mills to be used exclusively for city school purposes. This, however, can not be done until after the county has already voted upon itself a county school tax of 3 mills. The purpose of this latter restriction is evident. It was designed to prevent a wealthy district in the county from voting upon itself a tax adequate to support its own schools and then voting down the county tax in which the rural schools would share. It would be quite possible, however, for a city to vote for the county tax and yet have this tax defeated by the voters of the rural districts. In Autauga County this actually happened. In such an event the city is deprived of the privilege of taxing itself for the support of its own schools. Incidentally, it may be noted that when a city desires to vote upon taxing itself for school purposes, it is the county board of revenue that must call the election.

According to records in the office of the State superintendent of education up to October 1, 1918, only 6 out of the 46 cities in the State have availed themselves of this privilege of levying a special city school tax. Some others have voted the tax since that time, and a few others have called elections. The smallness of this number is significant. Some reasons for it will be discussed later.

5. It is the common practice in the smaller cities of Alabama to charge the children who attend the schools certain fees for that privilege, variously known as *matriculation*, *incidental*, *or tuition fees.* These names appear to designate differences in amount rather than differences in principle. Some cities distinguish between that portion of the school year known as the "free term" and that known as the "pay term." For the former they charge "matriculation fees" and for the latter "tuition fees." The term incidental fee seems to signify that, while no charge is made for the instruction, there is a charge for the supplies, the janitor service, etc. Sometimes the fees charged apply only to high-school pupils, but usually to all pupils. Sometimes they apply to only a portion of the term, but more frequently to the entire term, including the period of compulsory attendance. These fees range in amount from the "nominal fee" of $1 per term to the considerable amount of $5 per month charged in some high schools.

Table 2 shows the total amount received by each city in Alabama during the school year 1917–18, as shown in the State superintendent's annual report for that year, with the amount of tuition fees collected by the school, and the percentage of such amount upon the total school receipts for the year.

TABLE 43.—*Total amounts received by cities for school purposes—Tuition fees.*

Cities.	Total receipts.	Receipts from pupils' tuition.	Ratio of tuition to total receipts.	Cities.	Total receipts.	Receipts from pupils' tuition.	Ratio of tuition to total receipts.
			Per cent.				*Per cent.*
Alabama City	$10,195	....	....	Huntsville	$27,735	$ 4,190	15
Albany	24,988	$9,052	36	Jacksonville	5,542	642	12
Alexander City	10,702	3,148	29	Jasper	8,754	3,214	38
Andalusia	12,371	1,663	13	Lanett	25,665	....	....
Anniston	39,564	5,416	14	Marion	6,998	972	14
Atmore [1]	....	....	....	Mobile	215,310	10,611	5
Attalla	9,268	2,320	25	Montgomery	146,139	567	.4
Bessemer	86,918	380	.44	Opelika	16,461	3,271	20
Birmingham	672,918	2,490	.37	Ozark	7,775	3,400	44
Brewton	9,083	2,000	22	Pheonix	6,702	2,070	31
Bridgeport [2]	3,433	....	....	Piedmont	6,489	770	12
Cullman	8,032	1,171	14	Prattville	6,452	1,554	24
Decatur	15,737	1,240	8	Roanoke	14,071	5,011	36
Demopolis	10,185	435	4	Russellville	4,017	1,617	40
Dothan	27,731	11,677	42	Selma	45,881	7,480	16
Enterprise	5,500	2,300	42	Sheffield	11,690	87	.75
Eufaula	9,025	1,500	17	Sylacauga	5,353	1,897	35
Florala	7,295	937	13	Talladega	16,715	....	....
Florence	17,233	2,473	14	Troy	60,162	....	....
Gadsden	36,442	1,491	4	Tuscaloosa	40,209	10,169	25
Girard	10,118	1,537	15	Tuscumbia	11,679	....	....
Greensboro	5,208	1,583	30	Tuskegee	5,110	1,190	23
Greenville	9,039	2,314	26	Union Springs	11,409	....	....

[1] Not listed as city in 1917–18.

[2] Data for 1916–17.

6. Sometimes when public funds are not available in sufficient quantities, the people interested in the school will make *subscriptions of money* to be used in supplementing the public funds. In some instances, buildings have been erected through the generosity of individuals or corporations. So long as private funds are used

wholly for public purposes, and so long as they are not depended upon to take the place of public funds, but only to supplement them, they are actually helpful to the educational interests of the community.

Some underlying principles.—Whatever differences of opinion there may be in regard to the best method of distributing public funds for public schools, the following general principles would seem to be self-evident:

1. All children, whether in city or country, should have equal opportunity for education.
2. State or National aid should be apportioned to communities in such a way as to encourage the communities to do as much as they can for themselves. It should not be applied in such a way as to pauperize the community or to penalize it for helping itself.
3. There should be at least a reasonable degree of certainty in regard to the distribution of school funds. It is better to have a definite, even though a small amount of money, than to have the mere possibility of obtaining a larger sum.
4. Every child of school age in the State is entitled to receive free of any charge such instruction as is suited to his age and development.
5. The State should adopt a definite policy with reference to the education of Negro children and the apportionment of funds for them.

Application of these principles.—While these general principles would seem to be so clear as to be self-evident, the application of them in a just and equitable manner may not be so clear. The following suggestions are made by way of application of these principles:

1. The method of apportioning State school funds is a State-wide question and is dealt with elsewhere. The method of distribution should in the first place be definite and clear-cut and should not be left merely to the judgment of the county board or any other official body, no matter how honest or how intelligent.

2. As to the principle that State or National aid should be applied in such a way as to encourage communities to do the most they can for themselves, it is obvious that in many instances the present practice works in exactly the opposite way. The real reason why only 6 out of the 46 cities of the State had last October availed themselves of the privilege of taxing themselves for the special support of their schools was that in some instances cities feared that if they taxed themselves the amount of State and county money received would be reduced or withdrawn altogether. Whether or not their fears were well grounded, it is at least undeniable that county boards could reduce or withdraw these funds should they see fit to do so. This

is now done in one case. In other words, a city progressive enough to tax itself for the support of its own schools was penalized by having State and county aid withdrawn or reduced.

3. As to the matter of uncertainty concerning the amount of school funds available, it may be pointed out that there is absolutely not one dollar which the city board of education may count upon as available for running its schools without first appealing to some other official body. The city school board receives from State and county school funds only such amount as the county boards see fit or deem wise to give. Before they can use the general city fund they must ask for and obtain it from the city commissioners. The special city school tax can not be levied unless the county has already taxed itself 3 mills for school purposes, and not in excess of the rate levied by the county. Even then the county board of revenue must be asked to call this election. The collection of tuition fees is impossible unless the patrons see fit to pay them.

This situation makes it absolutely impossible for a city school board to conduct its affairs in a really systematic or businesslike way. No individual can properly plan his expenditures or business firm operate its business intelligently without some idea of its probable revenues. The only way in which it is possible to conduct a business successfully is to have a budget available for expenditure and then to expend it in the best and most systematic manner possible. One can not plan any expenditure intelligently without having at least some idea as to his income; yet this is exactly what city school boards in Alabama under present conditions are required to undertake.

4. The fact that every child of school age is entitled to attend school without any charge carries with it its own obvious suggestion. Needless to say no school can properly be classed as a free school or public school if there is any money charge whatever for admittance or attendance. While the practice of charging fees is more common in the smaller cities, it is sometimes found among cities not so small. It is commonly said by way of justification that these fees are not charged when the money can be obtained from any other source, and that it is better to charge fees than to close the schools. However, when a city has not taxed itself as far as the law allows it can not truly be said to have done all it can to provide free schools for its children. It is quite commonly recognized that the charging of fees for attendance upon free schools is contrary at least to the spirit of the laws, although certain Alabama courts have held that the charging of an incidental fee does not violate the letter if expended for incidentals. The fact that most schools charging such fees keep what is known as a "free list" or "charity list" of children supposedly too poor to pay for their own schooling would seem, if anything, to make matters worse. It tends to degrade the idea of a public school to

that of a charitable institution, and to keep alive the idea of what was formerly known as the pauper school in certain of the States. Public schools for the poor only are certainly not democratic and are not in keeping with the ideals of the twentieth century. Communities should provide from public funds the money necessary for the support of their schools, and the collection of fees for attendance upon public schools, if not now a violation of law, should be made one by plain unequivocal legislative enactment.

5. The consideration of a distant financial policy in the matter of Negro children opens up a very large subject and involves many questions. The State is spending far less money per capita for its Negro children than for its white children. So long as this policy is continued there will be differences of opinion as to the distribution of State and county funds for Negro children. As one citizen of Alabama expressed it, "You ought not to give a city money for its Negro children unless it is going to expend that money in educating them." The whole question of Negro education in the South is a complicated one. It will be discussed further on in this report, under a separate heading.

That the city schools of Alabama are not as a rule receiving the financial support which they should is shown by the following table. It gives the amount of money spent on the schools of various cities in the Union on the per capita basis of total net enrollment, and also upon that of average daily attendance in the schools. Night school enrollment and expenditure are excluded from the totals given. The cities used are taken from various portions of the Union for purposes of comparison:

TABLE 44.—*Enrollment, attendance, and expenditure for public schools for year 1917–18.*

Cities.	Population, 1910.[1]	Total net enrollment, 1917-18.	Average daily attendance.	Total current expenses.	Per capita cost based on enrollment.	Per capita cost based on average daily attendance.
Omaha, Nebr	150,355	30,506	24,933	$1,597,215	$49.41	$60.45
Birmingham, Ala	132,685	30,946	21,302	638,178	20.62	29.96
Scranton, Pa	129,867	24,984	19,897	886,351	35.48	44.55
Cambridge, Mass	104,839	15,359	13,652	767,203	49.95	56.20
Akron, Ohio	69,067	26,633	23,863	878,649	32.99	36.82
Peoria, Ill	66,950	12,528	9,313	480,461	38.35	51.59
Terre Haute, Ind	58,157	12,885	9,955	495,863	38.48	49.81
Mobile, Ala	51,521	7,878	5,646	176,811	22.44	31.32
Topeka, Kans	43,684	8,405	6,501	397,004	47.23	61.07
McKeesport, Pa	42,694	8,488	6,884	307,521	36.23	44.67
Berkeley, Calif	40,434	10,611	7,336	533,981	50.32	72.79
Montgomery, Ala	38,136	6,151	4,447	119,220	19.38	26.81
Woonsocket, R. I	38,125	4,746	3,626	159,642	33.64	44.03
Oshkosh, Wis	33,062	5,298	4,118	182,990	34.54	44.44
Atlanta, Ga	154,839	28,569	25,563	915,000	32.03	35.80
San Antonio, Tex	96,615	23,401	15,531	674,063	28.83	43.44
Louisville, Ky	259,000	30,141	22,757	987,880	32.77	43.41

[1] Not including night schools.

The significance of this table is obvious. If Omaha, Neba., finds it necessary to pay $53.43 for each pupil in its elementary schools and

$86.64 for each pupil in its high school, or $60.45 for each pupil in all its schools, surely Birmingham, Ala., of approximately the same population as Omaha, must need more money for its schools when it is only expending $25.63 for pupils in its elementary schools, $59.21 for each pupil in its high school, and $29.96 for each pupil in all its schools.

After all, however, the question of the exact method of apportioning money, important though it is, is of distinctly secondary importance in trying to solve the financial problem of the city schools. The really significant fact is that there is not in the aggregate enough money to go around. In such a case the best possible method of distribution will still fail to make a little money do the work of more.

If Topeka, Kans., finds it necessary to pay $56.65 for every pupil in its elementary schools, $71.30 for every pupil in its high schools, and $61.07 for every pupil in all its schools, then certainly Mobile, Ala., with approximately the same population, needs more money for its schools, when it is only expending $25.46 for every pupil in its elementary schools, $40.51 for every pupil in its high school, and $31.32 for every pupil throughout its schools.

An extreme of contrast is shown when we notice that Berkeley, Calif., expends $63.54 for every elementary school pupil, $108.64 for every high-school pupil, and $72.72 for every pupil in the schools; while Montgomery, Ala., a city of approximately the same population, only expends $21.51 on every elementary school pupil, $49.31 on every high-school pupil, and $26.81 on every pupil throughout the schools. Certainly these figures show that Montgomery needs to spend more money for its schools.

All the figures above quoted are based upon average daily attendance. A comparative study of the entire table given will certainly strengthen the belief that the city schools of Alabama are not receiving anything like as much financial support as they should receive, or as other cities of similar size elsewhere are receiving.

Recommendations for increasing appropriations for school purposes.—As to the way in which Alabama cities may secure more money for their schools, your committee submits the following recommendations:

1. Every Alabama city that really desires good schools should avail itself to the utmost of those sources of financial support which are now open under the law. In other words, every such city that has not already done so should tax itself to the full extent of the 3 mills allowed by law as a special city school tax. If conditions can be so changed that in voting for such a tax a city will feel that it does not run the risk of being penalized by having its State and county funds reduced or withdrawn, it is believed that a general campaign for special city taxes will be made in the cities of Alabama.

2. If the full amount allowed by law will not suffice to give the cities as much money as is needed for the support of their schools, or as much as is being expended by similar cities elsewhere, then steps ought to be taken to provide more.

This is a State-wide problem and is treated elsewhere. The constitution of Alabama provides that all property shall be taxed at a fair estimate of its cash value, while a legislative enactment provides that it shall be taxed at 60 per cent of its value, and statistics show that it is actually taxed at about 22 per cent of its taxable value.

To raise more than two and one-half times as much money for the schools as is now being raised, it would be necessary merely to follow the State law, and to raise four and one-half times as much, it would only be necessary to follow the constitutional provision.

The superintendent of city schools.—Each city school board elects a superintendent of city schools. In the smaller cities where there is perhaps only one building for white pupils and one for colored, the superintendent usually teaches one or more classes and is in reality merely a supervising principal. In the very smallest cities he usually teaches the entire school day and is merely a kind of head teacher.

Salaries paid to city superintendents vary from $850 to $5,000. In the largest city of the State, the superintendent is paid $5,000 a year. In Mobile the superintendent of city and county jointly is paid $3,300. In the third city in the State, the superintendent is paid $3,000. One city of moderate size last year raised the salary of its superintendent from $1,800 to $2,400. The lowest salary quoted in the State superintendent's report for 1917–18, $850 per year, is paid to the superintendent in a town employing 10 white and 5 colored teachers.

The State school law has very little to say by way of defining the duties of the superintendent of schools. Section 1354 reads as follows:

> It shall be the duty of the board of education to elect a superintendent of schools, fix his term of office and salary, and prescribe his powers and duties. The superintendent shall be required to give bond for the faithful performance of his duties, which shall be payable to said city, in a sum to be fixed by the board, not less than $3,000, with surety or sureties to be approved by the president of the board, the bond to be filed with the clerk of the city or town. The superintendent may be elected clerk of the board of education, and if so elected his bond shall stand as security for the faithful performance of his duties as clerk as well as superintendent, however conditioned. It shall be the duty of the clerk of the board of education to keep full and correct detailed account of all money received and expended. The superintendent shall attend to the taking of the school census, which shall be taken in the month of April of each odd year, and it shall be his duty to make complete and accurate reports of the same to the superintendent of education of the State.

From the above it will be seen that the only duties specifically assigned to the superintendent of city schools by the statute are the duty of taking the census and certain strictly clerical lines of work. As a matter of actual practice, however, executive duties are delegated to the superintendent of schools. In most of the larger places of the State the superintendent is recognized as having the right to nominate teachers, and in general to manage the internal affairs of the schools. In fact, in all matters other than financial the superintendent of city schools in Alabama seems to have about as much of authority and of responsibility as have most men holding similar places in other States of the Union.

With reference to the selection of teachers, the chief limitation upon his authority seems to be the somewhat general dominance of the "home talent" idea.

In financial matters the influence of the city superintendent is purely of an advisory nature. In many instances, though not in all, he prepares for the school board a tentative budget of expenses for the schools for the ensuing year. Owing, however, to the uncertainties concerning the income of the city schools caused by the present method of apportionment, it is a difficult matter for the superintendent to figure intelligently from year to year as to what can be done in the way of increasing salaries, employing additional teachers, and making needed extensions of school work.

Some superintendents assume their measure of responsibility in the matter of securing needed funds for the schools. Others seem to have some measure of timidity, if not of indifference, in the matter of finances. Certainly, until any given city has gone to the full extent allowed by law in the matter of taxing itself for the support of its schools, the superintendent should feel it his duty to leave no stone unturned to arouse the enlightened conscience of his community on the subject of school finances. The superintendent should stand in his community as a leader in respect to acquainting the public with the work of the schools and their needs. He should lose no opportunity to enlist the active interest of the patrons in concrete plans and projects for better maintenance.

In Birmingham there is an assistant superintendent of schools and also a staff of eight special supervisors. In Mobile there are four supervisors, and in Montgomery there are two. In three of the other cities of the State there is one special supervisor to each city. In the remaining cities, however, there is practically no supervision other than that which is given by the superintendent. This work of helping, directing, and inspiring teachers is one of the most important phases of the superintendent's work. It is the observation of the committee that, due in some instances to the fact that the superintendent is teaching for most or all of his time and in some instances to failure to recognize his opportunity, this important field of usefulness is frequently neglected.

In many cities of the State the superintendent is elected for a term of one year. In Montgomery, Gadsden, and some other cities the term is two years. In a few instances it is three years. In actual practice, the tenure of office of the city superintendent of schools in Alabama appears to be more stable than in most States. Birmingham has had the same superintendent for more than 30 years. Mobile and Montgomery have each had one change within that time. In Greenville there has been no change for 26 years. All things considered, it appears that the city superintendent of schools in Alabama is rather less subject to change on account of political pressure than are superintendents in most States.

The city teachers.—According to the report of the State superintendent for 1917–18, there were in the schools of the 46 cities of the State of Alabama during that year 160 male white teachers, 1,328 female white teachers, 62 male colored teachers, and 383 female colored teachers; a total of 1,488 white teachers and 445 colored teachers.

Practically all of these were certified under the State law. While theoretically the cities of the State still have the right to require their own examinations for certificates for their teachers, they have practically all ceased to do so and are recognizing those granted by the State, except in the case of certain special subjects. A detailed statement as to the requirements for the various grades of State certificates will be found elsewhere in this survey. A comparative statement showing the kinds of certificates of city and rural districts during the year 1917–18 is as follows:

Certificates of city and rural districts compared.

Teachers.	White.				Colored.			
	Life.	First.	Second.	Third.	Life.	First.	Second.	Third.
City teachers	457	511	374	54	46	21	240	138
Rural teachers	713	1,564	2,909	2,191	74	21	417	1,682

From the above it will be seen that although a much higher percentage of certificates of the upper grades is to be found among the teachers of city than among those of the rural districts, the percentage is nevertheless not particularly high. In other words, the story told by the record of certificates is that there is by no means a uniformly high standard of requirements for either the academic or the professional training of city teachers. Incidentally, it also shows a much lower requirement for colored teachers than for white.

The following table based upon questionnaires sent to teachers in the city schools for 1918–19 throws still further light upon the subject:

TABLE 45.—*Training, experience, salary, and work of teachers.*

A.	Elementary training.			Secondary training.				Normal training.		College training.					Summer school training.							Degrees.	
	Years attended.			Years attended.				Did not graduate.	Graduated.	Years attended.				Graduated.	Weeks attended.							Bachelor.	Master.
	6	7	8	1	2	3	4			1	2	3	4		2	4	6	8	10	12	18 or more.		
Number of white teachers.	135	676	385	39	106	198	130	627	400	106	149	129	204	401	8	23	276	37	118	90	299	373	28
Number of colored teachers	13	155	180	7	21	52	177	154	126	13	17	18	39	53	3	7	107	9	17	38	26	9	2

B.	Number of months of teaching experience.						Number of schools taught.								Monthly salary.								
	Elementary.			Secondary.			1	2	3	4	5	6	7	8 or more.	Under $35.	$36 to $40.	$41 to $50.	$51 to $60.	$61 to $70.	$71 to $80.	$81 to $90.	$91 to $100.	Over $100.
	Under 10 months.	11 to 25 months.	Over 25 months.	Under 10 months.	11 to 25 months.	Over 25 months.																	
Number of white teachers.	121	208	712	134	138	251	182	271	226	172	133	104	29	48	1	2	16	137	291	267	154	144	145
Number of colored teachers	18	72	192	13	28	25	74	97	75	32	24	9	3	6	25	108	103	47	25	10	4	5	2

C.	Cost of board.					Number of dependents.				Amount saved.		Number of daily recitations.					Needing supervision.		Will remain in profession.	
	$12 or less.	$15 to $20.	$21 to $25.	$26 to $30.	$30 or more.	None.	1	2	3 or more.	None.	Very little.	5	6 to 10.	11 to 20.	21 to 25.	25 or more.	Yes.	No.	Yes.	No.
Number of white teachers.	6	112	208	214	318	579	208	156	96	544	161	145	786	256	32	1	506	315	732	221
Number of colored teachers	23	140	36	8	1	57	98	88	75	187	77	20	200	75	15	6	236	40	233	68

Teachers' salaries.—According to the report of the State superintendent of schools for 1917–18, the average yearly salaries paid to city teachers and rural teachers in the State during that year were as follows:

Salaries of city and rural teachers compared.

	White.		Colored.	
	Male.	Female.	Male.	Female.
City teachers	$1,347	$575	$476	$315
Rural teachers	377	321	167	139

These figures reveal that, although the amounts paid to city school teachers in Alabama are somewhat larger than those paid to rural teachers, they are still pitiably small. The amounts paid to male teachers undoubtedly include those paid to superintendents and principals in the larger cities. Furthermore, it must be remembered that the large city of Birmingham reported for that year 611 teachers out of 1,933, or almost one-third of all the city teachers in the State. The cities of Birmingham, Mobile, and Montgomery, with more than one-half of all the city teachers in the State, raise the average to a considerable extent. The salaries in the smaller cities were decidedly less.

However, even on the basis of the figures above given, it is evident that if the amount were distributed through the 12 months of the year, the average salary paid to a white man teacher in the city schools of Alabama was $112.25 per month, the average salary paid to a white woman teacher was slightly less than $48 per month, the average salary paid to a colored man teacher was exactly $38 per month, and the average salary paid to a colored woman teacher was exactly $26.25 for each month of the year. These figures include high-school teachers as well as teachers in the grades.

It is useless to expect the very highest kind of services or of ability for such salaries. If the quality of the teaching in the schoolrooms of Alabama is not as high as it ought to be it is doubtless worth at least all that is paid for it.

In most of the smaller cities $70 a month is the maximum paid to grade teachers in the white schools. In some places it is $60 a month. High-school teachers are paid slightly more than grade-school teachers. Nevertheless, in the smaller cities of Alabama a high-school teacher who receives as much as $90 a month for nine months may consider herself fortunate. Teachers are not only paid less than stenographers, bookkeepers, and others engaged in commercial lines; they are paid less than teachers in similar cities in other States. It would seem to be hopeless to try to raise the standard of teaching in Alabama cities very much above what it is at present until it becomes possible to pay the teachers more nearly in accordance with the value of the services expected of them.

The maximum salaries paid to grade teachers in the white schools in several representative Alabama cities during the year 1918–19 are as follows:

Maximum salaries of grade teachers in white schools in 1918–19.

Cities.	Per month for 9 months.	Per year.
Birmingham	$100.00	$900.00
Mobile	[1] 87.50	743.75
Montgomery	90.00	810.00
Selma	80.00	720.00
Sheffield	75.00	675.00

[1] For 8½ months.

Salaries in the colored schools are still lower. The average colored male teacher in the city schools receives slightly more than a third of the salary paid to the white male teacher; the colored female teacher in the city schools receives about 55 per cent of the salary paid to the white woman teacher in city schools. These salaries will be discussed further under the separate topic of the education of the Negro in city schools.

It is encouraging to point out that in many cities in Alabama there is a distinct upward tendency in teachers' salaries. In one city where the maximum for grade teachers is now $70, it was stated that two years ago the maximum was $50. Similar increases are noted in other cities. At best, however, these increases have not nearly met the increase in the cost of living.

Conditions during the present year have been made even worse than usual on account of the openings for workers caused by the war activities of the Government. The Alabama cities, as well as cities elsewhere, have this year lost many teachers who have gone into more remunerative Government clerkships, or who have taken positions left vacant by men who entered the Army. The prevalence of influenza during the early part of the present school term added to the difficulties. As a result, one superintendent of a school with 14 teachers reported that only 2 of those teachers were with him during the preceding year. One supervisor with 86 teachers under her direction reported that of this number 68 were new to the school system and a majority were teaching for their first year. In one high school the present teacher of science is the thirteenth in a period of five months. In one grade school, the ninth teacher so far this year was just entering upon her work in a given room. All these difficulties merely throw additional emphasis upon the necessity for paying better salaries to teachers in Alabama cities.

In many cities the prevailing price for board is given at from $25 to $35 per month. One small town reports that board can be secured for $15.

One factor which undoubtedly has its influence both upon the quality of teaching and upon the salaries paid is what is sometimes known as the "home-talent" idea. In many cities the percentage of teachers who live in the city is very high. In one fairly good-sized city it is estimated that 90 per cent of the teachers were local people. Within certain limitations, the teacher who was born and reared in a given community, and is consequently in touch with its ideals and needs, undoubtedly has it in her power by that very fact to render more service to the schools of her city than could any other teacher who has not had superior training or superior qualifications of some kind. On the other hand, it is equally true that if all or practically all the teachers in a given school system come from any one source, there is great danger that their horizon will be narrowed and their ideals lowered. No one city or school has a monopoly of all the things worth having. An occasional change of point of view is a good thing for any individual or any community. An occasional infusion of new blood may be helpful. Inbreeding is as bad for schools as it is for live stock or for human beings. The wider the field open for the selection of teachers, the greater the opportunity for the selection of good material. The smaller also becomes the likelihood of the bringing to bear of political or social pressure for the selection or the retention of incompetents.

It should be observed in passing that in many of the city schools of Alabama there seems to be a commendable school spirit. The teachers recognize that they are underpaid, but they are not sullen in regard to it. There is a spirit of cheerful, uncomplaining, loyal service which is in most instances wholly out of keeping with the small salaries they are receiving. This spirit simply makes it all the more urgent that these teachers should be better paid. It follows that better pay will demand better preparation on the part of the teachers.

In addition to providing for large increases in salaries of school employees, it might be well for the cities of Alabama to begin to consider the matter of retirement funds for the teachers. The city teachers' association of Mobile has made a beginning in this direction.

All grades of certificates issued by the State may be obtained by examination. Many students who are still in high school can and do pass those upon which second or third grade certificates are issued.

Alabama. It has the advantage of reducing the fire risk, eliminating the stair-climbing and simplifying the problems of light and ventilation. It lends itself readily to the unit idea of construction and hence is elastic. Many of the school buildings erected by the Tennessee Coal & Iron Co. are of this type. In addition to the other advantages which it possesses, this type of building costs less to construct than the conventional type.

In most instances the grounds for city schools are too small, usually less than one full block in area, even in the smaller cities. In some cases the building covers fully half of the ground available. In this day, when physical education is receiving increasing attention, and when games and athletic sports are becoming recognized as a legitimate and beneficial part of the modern school curriculum, certainly our school grounds should be large enough to afford room for healthful physical activities on the part of the children. Five acres is none too much for the elementary school, and 10 acres none too much for a high school; a full city block should be the absolute minimum size for the grounds of any city school.

All the above statements concerning conditions observed refer primarily to schools for white children. The situation with reference to buildings for colored children is far worse. In many instances, these buildings are neither safe nor decent. They will be discussed under a separate heading.

There is a wide range of difference in the degree of care that is given to city school buildings in the State. Many of them are clean and well cared for. On the other hand, there are many that can only be described as filthy. During the past year, it has been difficult to secure competent janitors at the wages available for this purpose. It may ordinarily be noticed that the smaller the wages paid to the janitor, the poorer is the service obtained from him. On one occasion, in a building that was noticeably filthy, the visitor asked the superintendent what was paid to the janitor and was told that it was $6 per week. The visitor was just about to suggest that better wages might perhaps secure better results when the superintendent stopped him with the observation that the reason the wages were so low was because there was really so little to be done.

The janitor is a highly important factor in the administration of any system of city schools. It pays to pay him enough money to secure adequate service from him. The plan which Bessemer has adopted of employing a school custodian for the supervision of janitors is one to be recommended to the larger cities.

School equipment.—There is as much diversity in the seating and other equipment of the buildings as there is in the buildings themselves. In many instances the seats are good, modern school desks. In some instances they are adjustable. In other instances, however, the desks are old and out of date. In some cases there are double desks and in others long benches with crude pine desks are used. These latter are the customary seating equipment in most of the Negro schools. No movable chairs and tables were observed in any of the primary schoolrooms of the State. Superintendents should consider the matter of giving them a trial. Desk chairs and other types of movable seating equipment were found in a few of the high-school rooms. They could with advantage be used still more frequently.

In the larger high-school buildings there is comparatively good laboratory equipment for the teaching of such subjects as chemistry, physics, and biology. Such is also the case in a few of the high schools in cities of medium size. However, in the high schools of the majority of the cities there is practically no laboratory equipment for the teaching of these subjects. In a number of such instances the superintendent reported that college-entrance credit is accorded the work done by his high school in these subjects, despite the obvious lack of equipment. There is a general lack of library material and likewise of teacher's helps, such as maps, globes, charts, handwork material, etc. The value of the equipment in all the schools of the 46 cities of the State, including seating equipment and all the rest, in 1917–18 is given by the State superintendent as $406,157 for white schools and $47,420 for colored schools.

School textbooks.—As has been quoted from the State law, it is made the duty of the city school board to select textbooks "so far as can be done without interfering with the State Uniform Textbook Law and the work of the State Textbook Board." However, this restriction practically takes away all authority from the local school except with reference to high-school subjects. A uniform State textbook law is, within certain limits, helpful in many respects. However, in order that the list of textbooks may be as helpful as possible, it should not only provide for uniformity but it should also leave room for flexibility. The State of Alabama has as good a list of textbooks in most instances as could be selected with a view to meeting all of the wide diversities of interests and of needs of the State.

Birmingham furnishes free textbooks to the children in the first five grades. Phoenix city furnishes free books to all her children. A few cities in which fees are charged furnish free textbooks and all school supplies, paying for them out of these fees.

The course of study.—There is a uniform course of study made out by the State superintendent of schools for use in all the schools of the State that are directly under the control of the State superintendent's office. The cities of the State, however, are not required to follow this course of study, except that they are required to use the State-adopted uniform textbooks in all of their elementary schools.

As a matter of fact the schools in most of the smaller cities follow the course rather closely.

With very few exceptions, the course of study in the city schools of the State is inclined to be narrow, academic, and conventional. In the grades below the high school there is practically no variety. Birmingham gives manual training to the boys, and cooking and sewing to the girls of its upper intermediate grades. Mobile teaches cooking and sewing to the girls in the upper grades as well as in the high school. Montgomery has domestic science in the grades of two schools in its mill district; also domestic science and manual training in its high school. In few other cities in the State is there any form of industrial work in the grades below the high school.

Mobile is at present the only city in the State with a system of kindergartens maintained at public expense. There are seven kindergartens in the Mobile public-school system with approximately 600 pupils enrolled, costing approximately $7,000 per year. When the financial situation in the Mobile schools is considered, it appears that this is a fairly liberal appropriation for kindergarten work. Birmingham formerly had a system of kindergartens, but has temporarily discontinued them for financial reasons. In several places in the State there are kindergartens maintained from private funds with more or less of connection with the public-school system. Among these places are Lanett, Florence, Opelika, and Tuscaloosa.

In most of the high schools in the larger cities, cooking and sewing are offered to the girls, and woodwork and mechanical drawing to the boys. Birmingham is the only city offering forging or machine shopwork. Cooking and sewing are offered to the girls in the high schools in more cases than manual training to the boys.

Commercial courses are offered only in the larger cities.

Four cities in the State within the past year took advantage of the Smith-Hughes fund in giving vocational work. Most of this work was done in Birmingham. Mobile had some classes in radio-buzzer during the war. Dothan received help from this fund to the extent of $6,000 for work in vocational home economics. Lanett received some of these funds for evening work and for part-time work.

In few cities in the State is any industrial work whatever taught to the Negroes. The Negro high school in Birmingham is organized largely along industrial lines and is in many respects one of the most impressive pieces of educational work to be found in any of the city schools of the State. In Selma, cooking and sewing are taught to Negro girls in sixth, seventh, and eighth grades.

In several cities no city high school is maintained, the work of giving instruction in the high-school subjects being turned over to the county high school located at these cities. The committee believes that this arrangement is a disadvantage to the high-school interests of the city, because it relieves the city of any financial responsibility for its own children of high-school grade. The county high school doubtless has its place in the educational system of the State, but that place is to educate the children of the rural districts of the county. Certainly it is not the place of the county high school to relieve the city of the necessity for caring for its own high-school children when the city is large enough to maintain a high school itself.

In practically all the cities the course of study is organized on the basis of seven grades below the high school and four years in the high school. This system prevails even in cities in which children are allowed to enter the first grade at 6 years of age, though in most cities they are not allowed to enter until 7.

There is only one school in the State which is referred to as a junior high school. This is found in Birmingham, and, as the superintendent of schools there explains, it is really not a junior high school at all. It is merely a building which for purposes of convenience is attended by pupils of seventh grades from certain adjacent elementary schools, and by overflow pupils from the first year of the Central High School. It is organized on this basis merely for convenience and not from principle.

The survey committee believes that it would be distinctly advantageous for the entire State course of study to be reorganized upon the six, three, and three plan, provided that before this is done the legal school age in the State be lowered so that pupils can be regularly admitted to the first grade at 6 years of age instead of 7 as at present provided by law.

The committee further believes that in all the larger high schools of the State strong industrial courses should be organized to correlate closely with the industrial interests of the community. Birmingham is already planning such industrial work as will bring her schools closely into contact with the great steel and iron industry which is the backbone of the city, and has some such work already going, Mobile should organize courses which will correlate with the shipbuilding industries. In some cities the lumber industry is the predominant one and should be recognized in the course of study. In cotton mill towns, courses in textiles should be given, with the cooperation of the mills if possible. In many cities, agriculture is the support and the dominant interest of the community. Strong courses in agriculture should be provided in these schools. In practically every city in the State, there should be some variation from the conventional course of study, for the purpose of meeting the special needs of the community. The most marked variation of all should be in the case of the colored schools. In the upper grades of these schools, the industrial note should be the predominant one.

In most cities promotions are made annually and are based largely upon the results of written examinations given at stated times. They should be made semiannually or oftener, and considerations other than formal examinations should be taken into account. Promotions in high schools should be made by subjects and not by grades.

The committee has observed that the enrollment in the fourth year of many of the high schools in the smaller cities of the State is unduly small. Upon inquiry as to the reason for this, the answer has been given in a number of instances that this situation is due to the fact that the institutions of higher learning accept high-school students with but 12 units of credit, which may be obtained in three years' of high-school work. Your committee feels that whatever may have been the justification for the practice in the past, the time has been reached when it should be discontinued.

No city in the State has a special room for the education of deaf, blind, or subnormal children. In one place we found an ungraded class for retarded pupils. Birmingham has two parental schools, one for whites and one for colored children, in conjunction with the juvenile court.

Health work.—In a few of the larger cities in the State, there is some form of medical instruction for which the city pays. Some of the others report that the laws requiring compulsory vaccination are enforced. Even in some of the larger cities, however, no effort is made to enforce compulsory vaccination. In one such city, a well-developed case of smallpox was found in one of the colored schools on the day the survey committee visited that school. It was stated that a large number of the pupils in that school had probably never been vaccinated.

Only three cities spend money for the specific purpose of physical training. In several others there was some form of physical exercise given certain rooms by the regular grade teachers. In many, however, the subject of physical education was ignored in the curriculum and in actual practice. In a few cities, some playground apparatus has been provided by outside agencies. In a number of the high schools encouragement of some nature is given to athletic games and sports.

In Mobile the National Government is furnishing play supervisors to the schools in certain districts. They visit the various buildings in turn at recess. In most cities, however, there appears to be nothing in the way of supervised play.

In several of the cities there are lunch rooms for the children, operated at cost either by the school board, the school improvement association, or the teachers. These lunch rooms appeared to be doing a good work for the health of the children by furnishing nutritious lunches at a minimum cost. The city of Selma seems to have this plan particularly well worked out. Children unable to pay are provided with the lunches without cost to them.

Opelika has the only swimming pool to be found in connection with any school system in the State. This was built without expense to the school board, by selling family tickets in advance at $10 each. These permit free access to the pool. Members of other families pay a small charge barely sufficient to cover the cost of operating the pool. Opelika is also one of the cities with playground apparatus in some of its school yards.

In many cases the toilet fixtures are of the most modern and sanitary kind. In some instances there were outdoor toilets lacking provision for even decent privacy. In a very few instances there were no toilets at all. In the Negro schools, in most instances, toilet facilities were neither adequate, decent, nor sanitary. In a number of instances, both in white and colored schools, even where toilet facilities are of modern character they are permitted to remain in a filty condition.

School attendance laws.—Under the general school laws of the State, provision is made for a compulsory school attendance of 80 days each year. However, any city or county that desires to do so may reduce this term to 60 days. Among the 46 cities there is a wide range in the strictness with which this law is being enforced. In a few instances there seems to be an earnest effort made to enforce it. In many instances city superintendents frankly stated that they were ignoring it. The prevailing attitude probably was that expressed by one superintendent when he said that in his city the compulsory attendance law was being enforced "rather lightly." The reason given for this is that, if every pupil were to attend, there would not be school facilities to accommodate them. Particularly is this true concerning the Negro.

The fact that in many cities a fee of some kind is charged for school attendance makes it seem unreasonable to expect the compulsory law to be enforced there. It is hard enough at best to compel a man to send his child to school when he does not wish to. It is practically impossible to compel him to pay for the privilege of sending. The compulsory education law in Alabama is, however, only in its second year. The fact that an earnest effort to enforce it is being made with reasonable degree of success in even a few of the cities shows progress and shows the growth of public sentiment. The child-labor laws of the State are gradually being enforced more fully, and tend by this fact to make easier the enforcement of the compulsory education law. The committee recommends that the period of compulsory attendance should be extended to cover the entire school year, and that the law be enforced.

School extension.—Birmingham is the only city in the State reporting the operation of night schools at the expense of the city. There are a few other places where night schools are maintained by mill owners for their employees. The problem of Americanization is not so serious in Alabama as in many other States, owing to the small percentage of foreign-born population in the State. However, the existence of a very large amount of adult illiteracy in certain sections would suggest the desirability of establishing night schools there. In these cities where there is an auditorium in the school building it is used to a considerable extent for community purposes. In a few cities the community center idea is recognized.

One of the most interesting and most helpful features connected with the city schools of Alabama is the work done by what is known as the School Improvement Association. This is an organization of friends and patrons of the schools. It works along lines similar to those of the organization known as mothers' clubs, school patrons' leagues, or parent-teacher associations in other parts of the country. As will be seen by the name, the emphasis is laid upon the improvement of the school. Generally this refers to the improvement of the physical conditions. If there is a piano, a victrola, or a sanitary drinking fountain to be purchased, and the school board has no money available for the purpose, the School Improvement Association furnishes it. It is undoubtedly a very helpful factor in the public-school work of the cities of the State. The only thing to be guarded against is the danger that the cities may come to depend upon this organization for things which they ought themselves to provide.

During the year 1917–18 this organization is credited with having expended $11,007 in betterments for the white schools in the cities of the State and $11,540 in betterments for the colored schools of the State.

In Birmingham the School Improvement Association has a constitution and by-laws that have been formally recognized by the board of education. The association itself is given quasi-official recognition by the board. In Andalusia a similar work is done by the school committee of the Ladies' Civic Society. This organization provided the money to furnish the domestic-science equipment in the high school.

Some outstanding educational object-lessons.—In addition to the excellent work being done in many of its cities, there are in the State of Alabama at least two concrete instances which are well worthy of study by cities interested in seeing the best type of school buildings and a broad and well-developed system of school activities. One of these is the system which the United States Government is developing on its Ordnance Reservation at Muscle Shoals. The other is the systems of schools established by the Tennessee Coal & Iron Co. for its employees in a number of places in the State.

The buildings for these schools are not expensive, but they are models in their way. They are one story in height and are constructed with reference to the most modern ideas of heating, lighting, and ventilation. The company furnishes medical and dental inspection. It gives systematic physical training, furnishes churches to be used in turn by the various denominations, club houses to be used by its white employees and their families, and "fraternal halls" for the colored employees.

The committee believes that it would be well for every school superintendent in Alabama who has not already done so to make a study of the school plant and the school activities in these schools. When due publicity is given and the people of the various communities begin to recognize the type of work which their schools ought to do, their educational vision will be broadened and the first steps will be taken toward securing the additional money needed.

Negro schools in the cities.—No observant visitor of the city schools of the State can fail to be impressed with the fact that in reality he is seeing two systems of schools instead of one. It is therefore necessary to consider the question of the education of the Negro separately.

The first place where the distinction arises is in the distribution of funds. As before stated, the State superintendent of schools distributes State school funds on a strictly per capita basis. It may be added, however, that the only place in the State school system where white and colored children are counted together on a per capita basis is in the State superintendent's office.

When the money reaches the county board, the matter of the further distribution of it is left to the discretion of that board. In a few instances this is done on a per capita basis between the cities and the county districts, but in most it is not. It is the question of the Negro children which has much to do with making the further distribution uncertain. It is argued, not without some show of reason, that if a city has a large percentage of Negroes, it is not worth while to give them their per capita share of the money, since it will not be expended upon the Negroes, but upon the white children of the city. It would certainly sound reasonable that if a city or other district is not proposing to educate the Negroes it is not entitled to receive its full share of the money which the State apportions for educating them.

With a view to meeting this condition the committee has elsewhere recommended that the State, in the distribution of its funds, should adopt some definite policy in regard to the education of the Negro children. Every city in the State that has any Negro population is making some effort to educate Negro children, but in no city is this satisfactory to school officials or citizens. This situation seems to rise not so much from any desire to deprive the Negro of the education which he should receive as from the fact that there are not funds enough to meet the school needs. The principle is generally accepted of providing first for the needs of the white children and then giving the Negro what is left. Ordinarily what is left is very little. The very worst school for white children is with few exceptions better than the best school for Negroes.

The Negro school building is ordinarily a dilapidated wooden building, a fire trap, frequently looking as if it were in danger of falling down. Seldom are there decent and sanitary toilets. The rooms are frequently filthy and overcrowded. In a few cities the superintendent did not know where the Negro school was located.

In one prosperous little city of the State there was an expenditure of some $20 per capita on the 350 white children enrolled. In the same city there were two colored teachers in a rented building with 175 children enrolled. The only contribution which the city made to this colored school was the payment of $50 a month to one of the teachers for seven months. The Negroes themselves by fees and from other sources paid the other teacher, the rent of the building, and incidental expenses. The $350 paid by the city for the education of these 175 children made a per capita expenditure of exactly $2 yearly on its colored schools, as opposed to $20 per capita on its white schools. In still another city, the principal was paid $50 a month, and out of this sum was expected to pay the rent for his school building. The other teacher was paid by tuition fees, if at all.

In one of the medium-sized cities of the State, Negro schools were actually run at a financial profit to the city. There were 446 children enrolled in this school, taught by six teachers, of whom five were paid by the city, and one by the Negroes themselves. The principal of the school holds a degree from the University of Chicago and was paid $100 per month. The first-grade teacher had an average attendance of 115 pupils, which she taught in two shifts of half a day each. She was paid $40 a month. The fourth and fifth grade teacher had 75 pupils enrolled and received $40 a month. These pupils received three months of school free, just as did the white children of the city. During this time the city met the pay roll of teachers, amounting to $260 a month, or $780 for three months. To provide this amount, it received from the State of Alabama $2.96 per capita on the 674 Negro children enumerated on its census, or $1,995.04 in all. After expending $780 for its three months of free term, there was a profit of $1,215.04 remaining from the transaction. For the remaining six months of the term, the Negroes paid tuition fees ranging from 50 cents a month in the lower grades to $1.50 in the upper grades. An average tuition fee of 75 cents a month would more than pay the full cost of salaries for the teachers, leaving the city a small profit on this portion of the term also.

The Negro citizens of this same community have raised $3,000 in cash to build an annex to relieve their greatly overcrowded building. The city commission had granted them permission to erect this building by the use of these funds.

In a number of cities the Negroes are engaged in raising funds for the erection of their own buildings. In one place, they started out to raise $20,000 for the erection of a high-school building and have already secured practically one-third of that amount. The money has been raised chiefly by entertainments.

A few cities are doing more for their Negroes. Montgomery probably has better, more substantial, and cleaner buildings for its Negro schools than has any other of the larger cities of the State. These are for the most part equipped with good desks, some of them adjustable. Selma has recently erected a good brick building for its Negro schools. Opelika has a school building above the average for Negroes. Mobile has one brick building for Negroes, Birmingham has one and is planning to have more when the proceeds of her recent bond issue become available.

Birmingham is the only city in the State that is undertaking to do anything adequate for its Negro children, along lines of industrial training. Its Negro high school is doing one of the most interesting pieces of educational work in the State. The equipment is the most meager. There are a number of wooden buildings, built somewhat on the cottage order. The boys of the school built some of these and painted them under the direction of their teachers. Every particle of the equipment is utilized. There is work in carpentry, painting, bricklaying, shoemaking, gardening, tailoring, dyeing, suit-pressing, shoe-shining, and many other lines of practical value. The girls in the printing shop furnished some visiting cards to the visitors on short notice. There is work in cooking, sewing, millinery, and home-nursing for the girls. During the recent influenza epidemic the girls from the home-nursing department of this school were a considerable factor in helping the physicians of the city and the surrounding country, to handle the situation. As a result of the favorable attention which their services attracted, a company which is putting in a large private hospital in the city is planning to use the services of graduates of this school and to give them such further training that they will rank as professionally trained nurses.

The leading hotels of the city call for the trained boys and girls of this school to help serve at special banquets and receptions. For this work they receive suitable pay. The principal of the school only sends on such occasions such boys and girls as have made passing grades in all their subjects. In the Council Elementary Colored School of the same city an effort is being made to work out the elementary course for colored pupils along similar industrial lines.

Your committee very strongly recommends industrial work of this kind for colored high schools and to some extent colored elementary schools all over the State. The industrial ideas of Booker T. Washington are embodied in the great school for negroes at Tuskegee, and are good ideas to consider in any scheme for Negro education. It is of course understood that, if a system of education is to be a vital thing, it must be rooted in the life and the ideals of the people for whose benefit it is intended and upon whose support it is dependent. No system of education, however commendable, would live permanently if it were imposed upon a people by an outside power, contrary to their thought and their ideals.

Theoretically, it might be argued that the same amount per capita should be expended by the cities of Alabama upon their Negro schools as upon their white schools. Practically, however, such is not the case and may not be the case for a long time. There are, however, certain principles that may suggest a certain minimum of undertaking which would be in accordance both with humanity and with enlightened self-interest:

1. It may be recognized, to begin with, that no system of education is likely to be worth a great deal more than it costs.

So long as the city expends only $2 per capita on the education of its Negro children, it is not likely to secure from that expenditure very much of educational return. To do anything adequate for the Negro will require more money than has been expended on his education.

2. It may be recognized in the second place that the Negro is industrially an asset to the South, but may become a liability. To make the asset reach its full value and to decrease the likelihood of its becoming a liability will require an intelligent, well conceived, and well executed system of industrial education. The recent exodus of Negroes from the South was caused partly by the scale of wages paid elsewhere and partly by the better schools obtainable elsewhere. The exodus went to the extent of causing the South to feel to some extent the shortage of Negro labor. This labor can never be of the greatest value to the South until the Negro receives in the schools such industrial training and such education in the fundamentals as will bring him to his highest capacity for service.

3. It should be recognized, in the third place, that the physical welfare of the city Negro has almost an immediate effect upon the physical welfare of the white inhabitants of the city. A case of small-

pox in the Negro schools may be transmitted to the children of the white schools. A case of smallpox in the home of the Negro washerwoman may be carried home in the clothes to the finest residence district of the city.

SUMMARY OF RECOMMENDATIONS CONCERNING CITY SCHOOLS

The committee recommends:

1. That the scope and power of city boards of education be enlarged in general, and with specific reference to the following powers:
   - (*a*) To call elections for the issuance of school bonds.
   - (*b*) To call elections for the levying of school taxes.
   - (*c*) To purchase school sites, approve building plans, and erect buildings.
2. That whatever money may be furnished by the State to the city schools should be—
   - (*a*) Sent directly to the city school boards.
   - (*b*) Apportioned on some definite basis so that the city may have some idea from year to year as to the amount of financial help it will receive from the State.
3. That every city which has not already done so should tax itself to the full legal limit for the support of its schools.
4. That the proper steps be taken to provide for the increase of property assessments until they shall at least reach the percentage of value provided for in the statute on the subject.
5. That the practice of charging tuition fees for attendance upon the public schools be abolished by law.
6. That the salaries of teachers in every city in the State be greatly increased.
7. That greater freedom be allowed to cities in the selection of textbooks.
8. That all public-school buildings in cities should be—
   - (*a*) Built as nearly fireproof as is practicable.
   - (*b*) Built with reference to the best and most modern ideas of heating, lighting, and ventilation.
   - (*c*) Built with auditoriums or assembly rooms.
   - (*d*) Built on the unit type, so they can be added to as need arises.
   - (*e*) Constructed with due reference to the widest possible use by the community as a whole.
   - (*f*) Situated on 5 acres of school ground in the case of an elementary school, or on 10 acres in case of a high school; and in no case on less than a full city block.
   - (*g*) Made as attractive as possible by design, by careful keeping, and by such devices as flowers, window boxes, etc.
   - (*h*) Designed after consideration has been given to the one-story type of school architecture for elementary schools.
   - (*i*) Equipped with movable tables and chairs in first-grade rooms and with movable desk chairs in high schools.
9. That the course of study should provide—
   - (*a*) A greater amount of physical training.
   - (*b*) Greater stress on education on health subjects.
   - (*c*) Greater flexibility to meet the demands of the individual child.
   - (*d*) Greater flexibility to meet the needs of different communities.
   - (*e*) More industrial work, preferably in cooperation with mills or other predominant local industries.

10. That pupils be promoted—
    - (*a*) Semiannually or oftener, instead of annually.
    - (*b*) Upon a basis including more than mere standing upon written examinations.
    - (*c*) In high schools, by subjects instead of by grades.

11. That the period of compulsory attendance be extended in the cities to cover the entire school year, and that the law on the subject be better enforced.

12. That there be better and more provision for activities along school extension lines, including night schools, afternoon classes, part-time schools, etc.

13. That the legal entrance age be lowered from 7 to 6 years.

14. That the State course of study be reorganized upon the six and three and three basis.

15. That schools for Negroes should—
    - (*a*) Have a term of not less than 6 months.
    - (*b*) Be housed in buildings that are safe, decent, sanitary, clean, comfortable, and sufficient in number.
    - (*c*) Provide adequate instruction in reading, writing, and arithmetic, and in such of the industries as the pupils will have the opportunity to engage in advantageously in after life.
    - (*d*) Pay their teachers enough to induce them to make proper preparation for their work.

16. That legal provision be made for greater uniformity in the constitution of city boards of education. It is suggested that these boards shall consist of seven members, each appointed or elected from the city at large. If not elected by the people, members of these boards should be appointed by the mayor and confirmed by the board of aldermen. They should hold office for a term of seven years, the term of one member expiring each year. Members of boards should be so selected as to make sure that that all classes of citizens and all the main industrial and professional interests are represented.

Chapter XIII.

INSTITUTIONS FOR DEFECTIVE, DELINQUENT, AND SUBNORMAL CHILDREN.

The survey committee has made no attempt to study the child-caring institutions of the State in detail because they have already been covered sufficiently in two excellent reports; the one, entitled "Child Welfare in Alabama," being an inquiry by the National Child Labor Committee under the auspices and with the cooperation of the University of Alabama; the other, entitled "Social Problems of Alabama," being a report by the Russell Sage Foundation made at the request of Gov. Charles Henderson. These reports list 2,191 children in 26 institutions, of which 341 are defectives in 3 State institutions, 1,103 are dependents in 16 municipal and private institutions, and 747 are delinquents in 7 State and municipal institutions.

The present section limits its discussion to the child-caring institutions maintained by the State and treats them in their primary aspects as supplements of the public-school system of the State, to which they must be joined if their educational functions are not to be wholly lost sight of in the present public demand to have these schools become self-supporting through the labor of the children.

Underlying premises.—It is difficult for the general public to think of these institutions as educational. Particularly is this true of the industrial schools which are directly descended from the old prison system and have unfortunately retained many of the prison practices. The schools for the deaf and dumb lie, in the popular mind, much closer to the public schools, because expert educators are needed to manage their wards. In the correctional schools the purely educational phases of institutional life are too often subordinated to the purely disciplinary and workaday life.

Purposes of the industrial school.—The reform school, or industrial school, exists for the training of children who have become wayward to the point where the home can no longer control them. The school must, therefore, stand *in loco parentis* and provide them with all forms of education—physical, intellectual, vocational, and moral, until such time as the inmates may be intrusted with liberty and in time become useful citizens.

(*a*) *Physical Education.*—These children need the best form of physical education under the direction of experts because by reason of bad environment and general neglect most of them at the time of commitment are in a poor physical condition. Their success in life, after leaving school, will depend largely on the equipment of health, strength, and good habits acquired in the school.

(*b*) *Cultural Education.*—Children committed to industrial schools are far behind other children of similar age in the common-school subjects. Thus of the 311 white boys in the elementary school of Alabama Boys' Industrial School (as may be seen in Table 46), only 1 child was ahead of normal public age grade, 9 were of normal age grade, and 301 were below normal age grade.

TABLE 46.—*Age grade of pupils.*

Grades.	Over 6 years, up to 7.	Over 7 years, up to 8.	Over 8 years, up to 9.	Over 9 years, up to 10.	Over 10 years, up to 11.	Over 11 years, up to 12.	Over 12 years, up to 13.	Over 13 years, up to 14.	Over 14 years, up to 15.	Over 15 years, up to 16.	Over 16 years, up to 17.	Over 17 years, up to 18.	Over 18 years, up to 19.	Total by grades.
I	0	0	4	3	5	2	2	2	3	1	0	3	3	28
II	0	0	1	3	1	8	7	7	6	10	4	7	2 2	58
III	0	0	1	0	3	9	3	9	12	9	3	1	0	50
IV	0	0	1	0	0	7	4	9	12	11	9	2	0	55
V	0	0	0	0	0	2	2	5	13	12	11	1	1 1	48
VI	0	0	0	0	0	1	0	3	10	10	9	6	2	41
VII	0	0	0	0	0	0	0	0	1	7	4	4	2	18
VIII	0	0	0	0	0	0	0	1	3	6	2	1	0	13
Total of ages	0	0	7	6	9	29	18	36	60	66	42	25	10 3	311

Industrial schools have sometimes attempted to follow the traditional system of public schools, usually with unsatisfactory results. This is true of the Alabama industrial schools for white children. These institutions should adapt their study programs so far as possible to the character and prospective lives of the inmates. According to a leading authority[1] the course may properly include oral and written English, drawing, arithmetic, and simple accounts, and should be administered directly in connection with the vocational pursuits of the inmates.

(*c*) *Social Education.* The industrial school should be organized in such a way that it can combine the influences of the home and the religious institutions. The best modern practice utilizes the cottage plan of living at these schools instead of the large dormitory system such as is used now in Alabama. The life and work of the institution should be centered about this cottage life and "so conducted as to lead to the formation of a body of useful habits." It is important to classify the children so that the relatively uncontaminated shall be kept safe from contamination. This can be accomplished by using the cottage plan.

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[1] Dutton and Snedden, Administration of Public Education in the United States, p. 453.

(*d*) *Vocational Education.* Many industrial schools have failed in their educational purposes because they have attempted to make the school more or less self-supporting through the labor of the children. At the present there is a demand in some quarters of Alabama that the State's child-caring institutions be placed on a self-supporting basis. It would be well for the advocates of this policy to study carefully the experiences of other institutions of a similar kind before committing the State to this questionable policy.

The best institutions have given up productive labor except so far as teaching the inmates trades and vocations that can be followed for self-support after leaving the school.

Purpose of the school for defectives.—The school for deaf mutes, for the blind, or feeble-minded, is organized for the custody and education of unfortunates who have inherited or acquired a variety of physical or mental defects. The State has taken upon itself to do what the home is unable to do for these children, namely, to prepare them for self-support, or at least, make an attempt toward developing them as useful members of society. To teach the deaf mute and blind requires the highest skill of experts. Their education must combine all phases of physical, intellectual, social, and vocational education. Although, of course, in quite a different combination, it is physical and mental defectiveness rather than waywardness that must be considered and overcome.

Educational needs of the Alabama industrial schools.—Little need be said on this subject as it has been well treated in the reports referred to above. However, this much may be added:

(1) *The Alabama Boys' Industrial School* is hampered in its vocational work for lack of equipment, most of what is now called equipment being mere junk. What is worse, low salaries have forced the vocational instructors out of the school. This must be remedied. The ordinary school work of the institution is in no wise correlated in the vocational work of the school and follows the old-line disciplinary order of things with too frequent and unnecessary resort to corporal punishment. The administration of the school is efficient, but is much hampered by use of cheap, unskilled labor. This school receives an appropriation of $12.50 per month for each inmate, which is very low in comparison with what is paid in many other States. The appropriation should not be less than $20 per month for each inmate.

(2) *The State Training School for Girls.*—This institution has recently been moved from Birmingham to a 500-acre farm some 15 miles away from the city. The school is under excellent management, but, like the school at Eastlake, is in urgent need of buildings and equipment. This school, too, would do well to adopt the cottage plan

of organization at once and to reorganize its curriculum as suggested above, on the plan of correlating the cultural subjects with the vocational work of the school and thus eliminating much of the old public school course.

This school likewise receives $12.50 per month for each inmate. Its amount should be increased to $20 per month, and special appropriations should be voted for cottages and new equipment.

(3) *The Reform School for Juvenile Negro Lawbreakers.*—Much praise could be given the plan and management of this school, which does its work in a genuinely industrial spirit, but the school is too meagerly supported to accomplish as much as it could do if properly supported. The institution draws $7 per child, with an additional allowance of $2 per month for salaries. Because of this indifferent support real educational work is largely lost in an effort to make ends meet economically. The agricultural work is exceptionally good, but little has been done in the trades because the school has practically no equipment for this type of work. The purely cultural education is very limited. The school has no classroom facilities; the school's auditorium, provided with opera chairs, is used in lieu of a regular classroom. Of educational equipment, there is practically none. Worse yet, one teacher only (and this one loaned to the school by Montgomery County) endeavors to teach the 300 children the rudiments of English, writing, arithmetic, etc. It is, of course, humanly impossible to do anything like effective teaching under such conditions. This industrial school is worthy of the best kind of support. The amount invested by the State ought to be increased to at least $15 per month for each inmate, inclusive of salaries.

(4) *Schools for defective children.*—The Alabama School for the Deaf and the Alabama School for the Blind are both located at Talladega, as is also the Alabama School for the Negro Deaf and Blind. The schools are all under one central administration and appear to be efficiently managed. Because of the increased cost of living and the necessity for expert teaching, these schools are now hampered under increasing difficulties. The present appropriation is $230 per year for each pupil. Out of this amount must come funds for repairs, equipment, and possible new buildings. On the basis of what many other States invest in this type of education, Alabama should appropriate about $400 per year for each pupil. An additional appropriation should be made to take care of urgently needed repairs and equipment.

A school for the feeble-minded.—Alabama has no provision for the care of those unfortunates who are commonly known as feeble-minded. Feeble-minded children can be found in some of the public schools, in the industrial schools, in the almshouses, in the insane asylums, and in homes where there are no facilities for their proper care. This deplorable condition requires immediate remedy. The survey committee accordingly earnestly recommends that the present legislature take the necessary steps to organize such an institution and to make liberal provision for its maintenance.

Administration of the child-caring institutions.—All of the above-mentioned institutions are in a broad way educational; but they partake also of many social features which lie beyond the ordinary experiences and practices of the professional educator. To leave their administration wholly to the educators would be unwise, as has also proved the case where the schools have been managed wholly by the so-called social experts. The best type of administration calls for cooperation of the two. All these institutions in the State, public and private, should, the committee believes, be placed under a State board of social welfare, as has also been recommended by the national welfare committee in its report, but with the definite modification that the purely educational work in the schools shall be directed by the State board of education (if created) through its executive official, the State superintendent of education, who shall also be a member of the said State board of social welfare. To this end, there should be maintained in the department of education a division of education for exceptional children, whose director should have immediate charge of education in the above mentioned schools.

Specific recommendations.—The survey committee makes the following specific recommendations for the improvement of the State's child-caring institutions:

1. Organization of a State board of social welfare to have charge of all child-caring institutions in Alabama.
2. Direction of all the educational work of the child-caring institutions to be under the management of the State board of education or State department of education, which shall maintain a specific division for this purpose.
3. Immediate establishment of a school for feeble-minded children.
4. Large increase in per capita support of all these institutions and liberal funds for enlargement and repairs.

Chapter XIV.

ILLITERACY AND ITS ERADICATION.

The prevalence of illiteracy in many States is a poor commentary on the efficiency of the Nation's school system and on the watchfulness of democracy in safeguarding its own future through an educated citizenry. If the public schools had been administered at a 100 per cent efficiency for the past generation, all persons of voting age would be classed as literate now; similarly, there would be no serious Americanization problem now, as night schools and similar educational facilities would have been utilized to blot out adult illiteracy and ignorance of our spoken and written tongue, and history and government, among natives and aliens alike. Never was there a time in history when this policy of indifference and *lassais faire* for the education of this large group of neglected Americans has seemed so near criminal as to-day, when all the human and economic resources of the world are needed for the coming reconstruction in human affairs.

Conditions over the country at large.—The United States, with a population upwards of 110,000,000 people, has nearly 6,000,000 persons over 10 years of age who are unable to read and write, and many who can not speak the English tongue. Of this large army of unfortunates 58 per cent are white persons. Of these 28 per cent are native-born whites and 30 per cent foreign-born whites; 40 per cent are Negroes; the rest—2 per cent—are Indians, Chinese, Japanese, etc.

More than two-thirds of all the illiterates come from rural communities. These illiterates are not limited to any race or to any one section of the country. The colored illiteracy of the South is almost balanced by the ignorant aliens of the North, and the white illiteracy of the great south Atlantic highlands is scarcely greater than the illiteracy in parts of the northern Appalachians.

The illiterates fall naturally into two groups—those of school age and those beyond school age; or, roughly speaking, persons between 10 and 20 years inclusive, and persons 21 years of age and over. For the former group the public schools are directly responsible; for the latter they can not be held altogether responsible, as, in the North at least, many of this group are of alien birth who have never come under the influence of the American public schools. The Nation's duty to its illiterates is twofold.

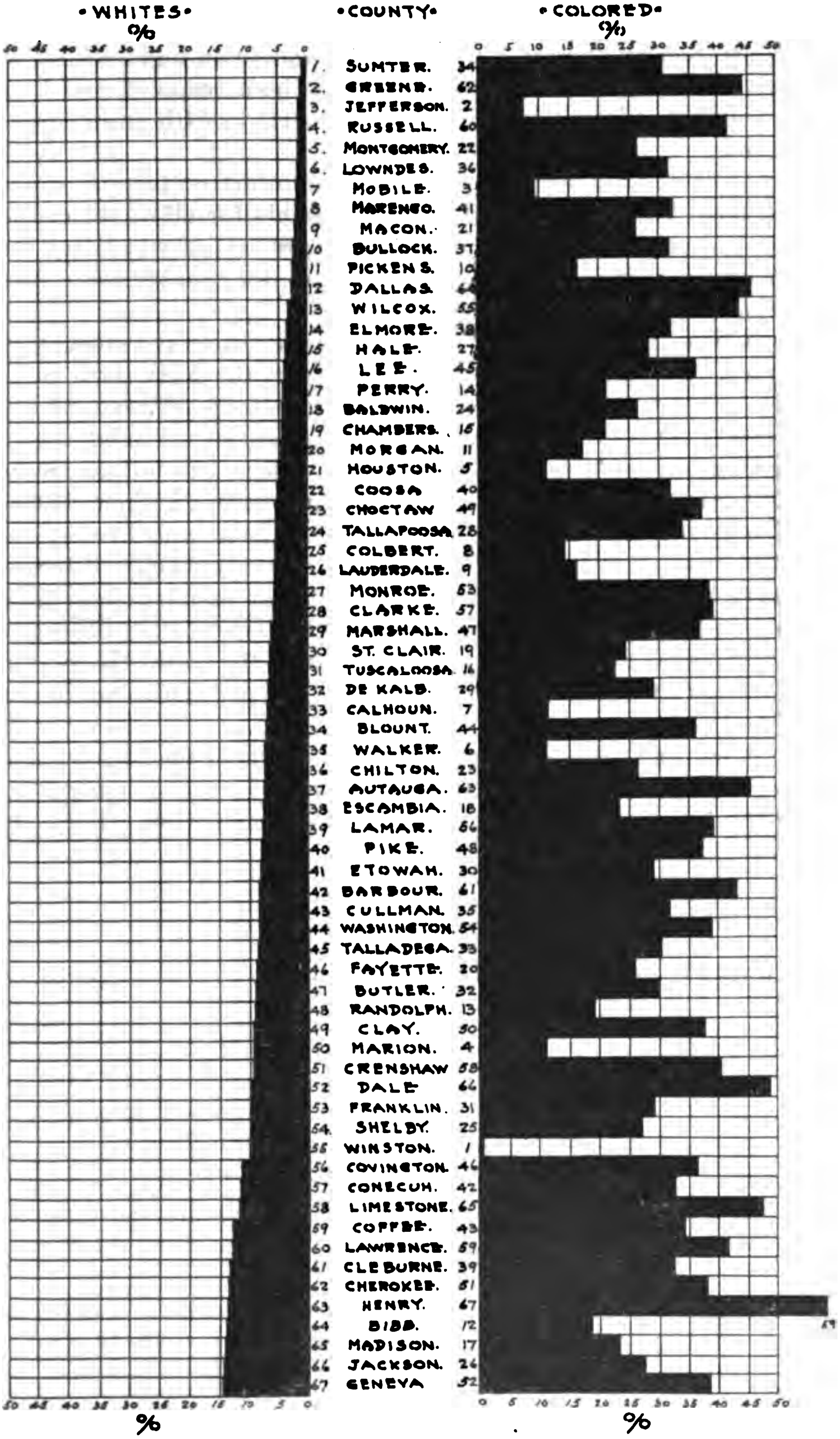

FIG. 18.—Illiteracy in Alabama by counties, 1918. (This includes school population only.)

1. To force every illiterate person of school age into the public schools to remain there in regular day session, or in night school, or in part-time school until this illiteracy has been removed, and they have acquired at least the equivalent of a fourth or fifth grade education; and

2. To place at the disposal of all illiterates above 21 years of age educational facilities that will make it possible for all of them who desire to acquire the rudiments of learning, and thereby be lifted out of the deadening materialism and indifference for country and fellow men that now so often overwhelms them.

Conditions in Alabama.—The State has an excessive amount of illiteracy. The 1910 census ranks Alabama as the forty-sixth State on the basis of largest number of illiterate persons 10 years of age and over. The Federal census and the Alabama biennial school census contain some enlightening data. There are in the State 641,168 persons between 10 and 20 years inclusive, of whom 96,406, or 15 per cent, are illiterate; there are 1,015,070 persons 21 years of age and over, of whom 266,273, or 26 per cent, are wholly illiterate. Of these, 31,661 are males of voting age who are unable to cast their ballots without assistance. In Alabama, also, most of the illiterates live in rural communities. According to the 1910 census the rate of white illiterates dwelling in the city was 2.5 per cent, and in the country 11.5 per cent.

Quite naturally illiteracy is most excessive among the Negro population. Of all the illiteracy in the State 75.4 per cent is among the colored, and 24.6 per cent among the white population. They are grouped by sex, age, and race as follows:

White:	
Children, 10 to 20 years of age	26, 259
Males, 21 years of age and over	31, 661
Females, 21 years of age and over	33, 765
Colored:	
Children, 10 to 20 years of age	70, 247
Males, 21 years of age and over	92, 744
Females, 21 years of age and over	108, 103

Figure 19 is a graphic commentary on this deplorable situation. The persons in the row with their backs turned can neither read nor write. Against them are shut the doors to literary knowledge and the precious stores of literary treasures that are the common inheritance of all mankind because they do not possess the "open sesame" of school education.

Startling number of illiterates of school age.—The average man has assumed that illiteracy must be limited wholly, or almost wholly, to certain unfortunates who have grown up remote from school, or under conditions of grinding poverty which has made school attendance impossible. This is incorrect, although illiteracy, no doubt, has had its inception in just such surroundings. Illiteracy in Alabama is not limited to the poor, nor to the remote sections with poor school facilities. The survey committee found plantation owners of good means who were neglecting to send their children to school. These people can not excuse themselves on the ground that there were no schools within reach of them, as the contrary is the fact. One well-to-do planter expressed it thus wise: "I have got along without any book learning myself, so I guess the children can too; besides, if I sent the youngsters to school, they might come to look down on their old 'pap.'" Such deluded individuals need one's sympathy, but for the sake of future generations they should be dealt with firmly and be made to realize that what they consider their personal rights is no more than perverted license.

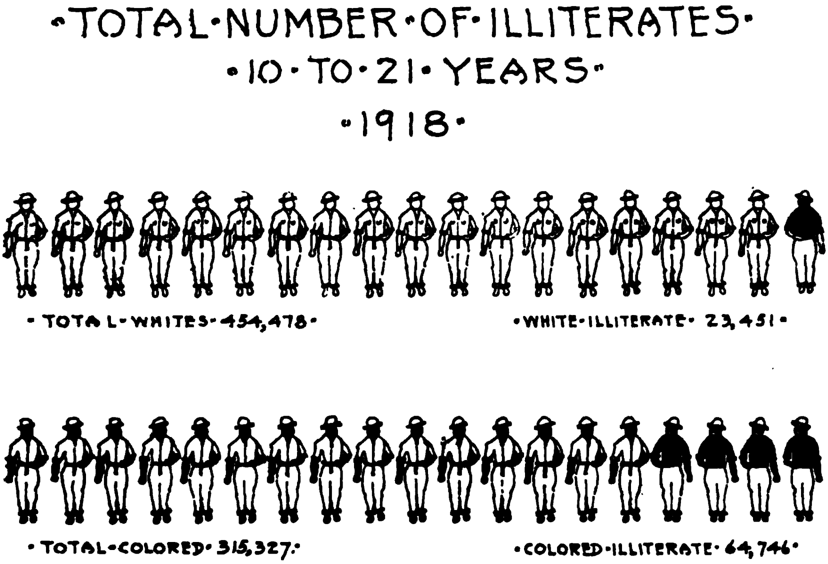

FIG. 19.

A startling number of all the illiterates are of school age, i. e., from 10 to 20 years of age. Table 47 shows this at a glance. Every person of school age should be able to read and write at 10 years of age, yet 19 per cent of all the white children of this age in 1914, and 49 per cent of all the colored, could do neither. This per cent gradually decreases up through the years, but it is very high throughout. Figures for 1916 and 1918 show a slight improvement, but it is clear to see that the school authorities in the State have a stupendous task ahead of them to remove this menace from the schools of the State.

TABLE 47.—*Per cent of illiterates of school age in Alabama, by census periods.*

Age of illiterates.	1914		1916		1918	
	Per cent white.	Per cent colored.	Per cent white.	Per cent colored.	Per cent white.	Per cent colored.
10 years	19	49	19	47	18.4	47
11 years	14	41	13.5	40	14	41
12 years	11	35	11	36	11.2	36.2
13 years	8.5	29	9	28	9	28
14 years	6	24	5.5	24	5	23.5
15 years	5.75	22	5	21	5	21
16 years	5	19	5	19.5	4.9	19
17 years	4.6	19	4.9	18.2	4.7	18.7
18 years	4	19	4	19	4	18.5

Adult illiterates of draft age.—The country as a whole was astounded at the facts brought to light by the recent war draft. In the registrations for persons between 21 and 31 years of age were found 700,000 young men who were wholly illiterate. These men were unable to read the posted orders of the day or to profit by the printed manuals placed at their disposal by the Government. When called to their country's standard they found themselves handicapped on every hand. From their own testimony they were often hurt and humiliated when they were brought into contrast and competition with other more fortunate fellow soldiers. One young Alabamian, who later learned to read and write during the special drive against illiteracy among men of draft age, writes in this strain:

> I am very sorry to say that I dident get any further than a praivate but that wasnot my falt. There was many thenses [chances] to advense but I culdnot get aney and the risen [reason] was bourse [because] I culdnot read or write. Everybody should be made lern to read and write.

These lessons from the camps and the trenches have probably gone home to the people as no other lesson has. Several States have already passed stringent Americanization laws to cope with this situation, and many others are contemplating similar action.

The average number of draft illiterates between 21 and 31 years of age, for the United States as a whole, was placed at 7 in each 100 drafted persons. In Alabama it was 17 in each 100 drafted persons.

Work of the Alabama illiteracy commission.—A vigorous campaign which has been carried forward in the State for some time by the State department of education, the State Teachers' Association, and other bodies of citizens culminated in the creation of the Alabama illiteracy commission. This law was enacted in 1915. The commission soon perfected a State-wide organization which has carried on a vigorous and successful campaign for the last four years. Much effective work has been accomplished, particularly among adult illiterates and in the special drive against illiteracy among men of draft

But the State evidently has not yet fully grasped its great opportunity and responsibility in regard to this vital question. This is evident in the fact that the State has been willing to throw the burden of financial support for the illiteracy work on the public-spirited people of the State, and has left the whole matter of education for illiterates as wholly optional and voluntary. While good results have been secured, it is nevertheless very doubtful if illiteracy can ever be eradicated unless the State invests liberal funds in the work and places it on a compulsory basis.

Stringent legislation and liberal appropriation.—The present legislature would do well to take the following steps in a final effort to blot out illiteracy in the State. The survey committee specifically recommends that such action be taken:

1. Strengthening the compulsory attendance law in accordance with recommendations in Chapter VI.

2. Enactment of legislation to promote Americanization by requiring school attendance of all persons above compulsory attendance age and below 21 years, who do not now speak, read, and write the English language, equivalent to the requirements for completion of the fourth grade of the public schools; providing for the establishment and maintenance of evening schools and part-time schools for this purpose, which schools shall be under the direct supervision of the State department of education.

3. Enactment of legislation to encourage effective illiteracy work among adults under direction of the State department of education, and maintained by funds voted by the legislature.

4. Appropriation of not less than $25,000 annually for the next quadrennium for the purpose of making such legislation effective.

Chapter XV.

SPECIAL PHASES OF HOME ECONOMICS TEACHING IN ALABAMA.

Home economics courses needed in the schools.—Nowhere are changing industrial conditions felt more keenly than in Alabama. The Negro servant is rapidly disappearing from the home in many parts of the State, and where still available asks a wage so high that the average housekeeper must forego her services. Moreover, for many years the Negro servant has been so poorly trained in household activities that her services have not been an asset to the home. As Negro help has grown more scarce and inefficient energetic housekeepers have undertaken to do most of the work of housekeeping themselves. They have begun to take a keen interest in its many-sided problems and to desire for their daughters the opportunity to prepare for the responsibilities of the home intelligently, whether it be to perform the household tasks skillfully themselves or to direct others to perform them worthily. To-day all women feel their responsibilities more keenly than ever before, because of the services which they have been called upon to render during the war. Home making is universally regarded as a profession for which conscientious preparation is absolutely necessary. If the schools are not offering girls the opportunity for such preparation their work is inadequate and must be revised upon lines that will measure up to the demands of the hour. For several years home economics courses have had a place in many of the schools of Alabama. It was to study the adequacy of these courses and to determine means of increasing their effectiveness that this part of this survey was undertaken.

Home economics courses established in State schools.—The teaching of home economics became a requirement in the nine district agricultural schools of the State in 1903. Courses in home economics were required in the county high schools in 1907. Montevallo Industrial and Technical Institute for girls has offered courses in home economics ever since its establishment in 1896. Home economics courses have been required or elective in the six State normal schools for a number of years. Four elective courses in home economics were introduced into the University of Alabama in 1917–18. Summer-school courses in home economics have been given at the State university, at Montevallo, at the Alabama Polytechnic, as well as at the State normal schools for five years. There are no State records of what has been done in home economics teaching in Alabama in the past aside from the regulations outlined in the courses of study for the State normal schools, the district agricultural schools, and the county high schools.

State regulations affecting home economics.—The State issues special courses of study for the State normal schools, the district agricultural schools, and the county high schools. These courses designate what phase of home economics is to be studied during the term such study is required, and names the textbook to be followed in each case, with the exception of the State normal schools, in which case choice is left to the several teachers. This is the only responsibility or authority the State has assumed in regard to home economics teaching aside from approving the appointment of the special teacher of home economics. Such a teacher must have a certificate as for regular teaching. In addition to this she must have had, in theory, at least, a special home economics course in normal school or college. Instances have been numerous in the past in which home economics teachers have pursued only brief courses in home economics and have had no normal training whatsoever in the subject. This condition arose because of the great scarcity of teachers of the subject when home economics first became a requirement in the State high schools. A similar condition has obtained through the past year, as war demands have drawn home economics teachers into other lines of activity.

Home economics teaching in the State normal schools.—The training of teachers in home economics has received very little attention in Alabama. Courses in this subject are required of all women students in the State normal schools, but so short a time is allowed for these courses that they can not be regarded as teacher training courses. They are planned to give some insight into the purpose of home economics in the schools, and the students who have finished the courses are expected to be able to handle sewing classes or the school lunch in the rural elementary school. However, as there are no entrance requirements maintained and most of the girls have had no previous training in home economics, the courses do not rank any higher than the courses given in the high schools. Brief summer courses in home economics have been offered at all the State normal schools, at the State University, Auburn, and Montevallo. As these have been only six weeks in length, they have been even more inadequate to serve as a means of teacher training. The State normal school at Florence offers one additional year of home economics which is planned as a special course for teacher training. In spite of

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The Alabama Girls' Technical Institute.—The only State institution which is frankly engaged in the preparation of teachers of home economics is the Girls' Industrial and Technical Institute, at Montevallo. The excellently equipped home economics building offers splendid facilities for the development of this work, but unless the work is supported by science courses of adequate strength and salaries are sufficient to retain teachers of highest standing, the needs of the State will not be met. At the present time courses are undergoing a process of development, due to the introduction of the teachers' training course under the Federal Board for Vocational Education. This course has already been lengthened from a two-year course to a three-year course and promises to insure the type of teacher training that is absolutely necessary to the proper maintenance of the courses in the elementary and secondary schools.[1]

The Negro normal schools.—The status of home economics in the three Negro normal schools of Alabama parallels that in the other State schools in several respects. Salaries of the teachers are exceedingly low. The teachers' hours are long; equipment is not adequate; and courses are poorly planned, owing to the teachers' lack of preparation.

In the State normal, located in Montgomery, adequate time is given to the sewing courses, but difficulties are experienced in securing materials for the necessary practical work. As a consequence, much repetition of problems that have no educational value is permitted. Courses are not sufficiently progressive. While the girls acquire skill of a sort, they do not progress as they should, nor do they obtain the thorough knowledge of clothing and textiles that a well-planned course should give. This is due in part to a lack of appreciation on the teacher's part of what is most worth while; and in part to a weak yielding to the temptation to provide the children with work which will give them the most pleasure. No facilities are afforded for the study of general housework.

The State Agricultural and Mechanical School at Huntsville is seriously handicapped by lack of funds for the provision of materials, and it has not so big a market for sales of articles prepared in the sewing classes as has the Montgomery normal. However, it has the advantage of supervised housework in the dormitory, and at the present time the teachers are planning an apartment in which housework is to be taught. The cooking classes suffer seriously from the lack of funds for the provision of materials and have not as full an equipment as will insure thorough practice.

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[1] See the recommendation in Chapter XX relating to the Smith-Hughes work in the training of teachers of home economics.

Tuskegee is much better equipped and more amply provided with materials than is either of the other two schools, but it still lacks, as they do, adequate courses in teacher training. This is being in part remedied at Tuskegee this year by the introduction of teacher training classes under the vocational board, and thus promise is given of a better condition in the future. Supervised housework in the dormitories and well-organized work in a practice cottage give the work at Tuskegee an added strength. Tuskegee is also doing much to keep in touch with State conditions and knows the needs of the rural schools where the majority of the graduates will teach.

Wise supervision by one who understands the needs of the State and who has opportunity to see what graduates of these schools are doing in the field is necessary to the future development of the work in the Negro normal schools. The good technical work must be continued. It must be carefully planned and graded. In addition to that, adequate teacher training courses must be developed. Salaries ranging from $160 to $400, as the majority of those in the Negro normal schools do range, are not sufficient to secure teachers of ability who will remain from year to year and who will develop into stronger and better teachers by devoting time and continued study.

The responsibility for the development of a better type of home life among the Negroes of the State rests very largely upon the normal schools, where the teachers are trained. As the Negro children are taught the essentials of housekeeping, the future welfare of the State will become permanently assured. Therefore, well-equipped home economics departments and well-trained teachers receiving adequate salaries are of vital importance.

Home economics in secondary schools.—Study of conditions as they exist in county high schools and district agricultural schools reveals the following:

(1) Salaries of teachers are extremely low; $630 to $810 per year; average, $702. Almost without exception the tenure of office of teachers has been very brief, from one year to six months; in several cases even less. Reports received from 39 schools indicate that 30 teachers have been in their present positions only since September, 1918; 5 for even a shorter period of time; and only 4 a longer period. As is to be expected under these conditions, permanent courses have not been established. The adjustment of the teacher to the situation is only partially accomplished, if at all. The courses are not contributing to the permanent upbuilding of the school and the community. Courses are quite ungraded and students are frequently required to repeat

under one teacher what they have already studied with another. Interest in and enthusiasm for the work is at a low ebb.

(2) The special teacher of home economics is required to teach a full program of any subject or combination of subjects made necessary, because of the smallness of the force of high-school teachers. Thirty-eight teachers reporting teach an average of four other subjects, 11 of them teaching more than four subjects. An average indicates that only 6 hours a week are given to home-economics teaching, while 21 hours are given to other subjects. For many of these subjects the teacher may have little or no aptitude and be entirely without preparation. The burden of preparing for these lessons will be such as to detract seriously from her strength for carrying on the home-economics courses to which she should contribute much of her time and her ability if they are to be successfully conducted. Moreover, she should come to know the needs of the community and the extent to which the girls are being prepared to meet these needs in their homes. This she will not have the time to do when she must prepare for eight or nine periods of teaching a day, especially if she is teaching a variety of subjects.

(3)The equipment in almost all of the State high schools visited is meager. In most of them it is in bad condition. Good working tables, cupboards, and machines are lacking. Teachers report the lack of care of school property and the necessity for replenishing equipment each year. There is little or no provision for janitor service, and conditions are such as to lead to discouragement on the part of the new teacher, particularly when her time is very fully occupied with teaching.

(4) Home economics ranks only as a minor in the course and no outside preparation of lessons is demanded. This does not tend to give it the dignity and rank of other subjects in the curriculum, nor does it permit of the teacher accomplishing that which is necessary to give the girls an adequate appreciation of the principles underlying home making.

(5) Standards of conduct in home economics classes are not high in a majority of the schools. The subject is not recognized nor is it presented as requiring serious study, and the girls are permitted "to enjoy themselves." Studious application and a high standard of accomplishment are seldom found.

(6) Library reference works are almost entirely lacking in the schools. The most energetic teachers supply this need in part by putting their own books at the disposal of their classes, but this by no means furnishes adequate reference reading.

(7) That home economics courses are not functioning in the life of the schools is apparent from the bad condition in which most of the schools are found. The home economics department should be

the center from which better housekeeping for the entire school radiates. This was found to be true in one or two cases. In one school visited the members of the home economics classes are given the responsibility of dusting the principal's office, looking after the condition of the toilet rooms, seeing to the order of the cloakrooms, and arranging and caring for flowers as they are brought into the rooms for decoration. In another school visited the home economics classes were preparing muslin covers for hotbeds cared for by the classes in agriculture, preparing noon lunches for the children, and serving the teachers during the meeting of the monthly institute. Such activities should not be the exception, but should be considered a legitimate part of the work of the department if the teacher is allotted a sufficient time to carry on her work properly and if students are required to do the work of a full credit course.

Located as many of the county high schools are, the children must carry lunches for their noon meal. Only two teachers report that they superintend a lunch that is served regularly to the students. Five report that such a lunch is served occasionally in their schools. The teachers of home economics lose a valuable opportunity for teaching food values and inculcating right habits of eating when they do not assume some responsibility in connection with the school lunch. The members of their classes may not always be able to prepare the lunch, but the teacher can nevertheless supervise its preparation and serving.

(8) Observation of lessons taught revealed the fact that the majority of teachers in the Alabama schools have been *very poorly prepared.* Of 35 teachers reporting, only 11 report special training in home economics; 9 have been to normal school; 14 have been to college; and 8 have been to both normal school and college. Three have had only a high-school education. Their teaching indicates that they have not grasped the real significance of the home economics course, and they fail to give their students an insight into the possibilities of better living. They have not mastered the arts of cooking and sewing, nor have they an appreciation of the necessity for a knowledge of food values and textiles. Lessons are carelessly presented, inadequately supervised, and left without summary or deductions. Standards are so low that the mothers of students must seriously question the value of the work-garments badly designed, stitches carelessly taken, and fitting and finishing poorly done.

(9) Few home economics teachers report any requirement for study or practical work in the home. However, a sufficient number report the interest with which the occasional pupil voluntarily practices at home to convince one of the desirability of making that practice a requirement. Skill can not be secured without practice, nor

can the school adequately teach home making unaided by the facilities which the home itself offers.

(10) In spite of the small salaries the teachers receive, 50 per cent report attendance upon summer school, study in correspondence courses, or other efforts for self-improvement. This is no doubt the result of the high standards which the State has set in this respect and speaks well for the ambition of the teachers, an ambition which should be more generously recognized and encouraged by the salaries paid.

As might be expected, such conditions have not tended to the building up of strong home economics courses in the schools. A majority of the teachers report that their work suffers from lack of equipment; at least 50 per cent feel that not enough time is allowed for the work; 25 per cent deplore the lack of funds for carrying on the lessons. Teachers are discouraged, and frankly state that they do not plan to continue to specialize in home economics teaching. Principals are urgently demanding teachers with special normal training in home economics. They say that at present the schools are "playing at" home economics and that the last two years of the course are practically wasted, since the teachers have not sufficient preparation to give so long a course.

CONCLUSIONS DRAWN FROM THE FOREGOING STUDY.

1. *State supervision.*—The schools in Alabama should have well-organized courses in home economics in charge of a competent and well-paid State supervisor, whose duty it should be to establish standards for home economics teaching, send out constructive plans for carrying on graded courses, visit the schools, pass upon the equipment and teaching, and in every way aid the teachers of home economics. Those counties which employ 12 or more teachers of home economics may desire to have a county supervisor of home economics as well as the State supervisor. A State supervisor should have had a thorough fundamental education and extensive training in home economics education; she should have followed closely modern educational movements; she should have had experience both as a teacher and an administrator; and she should be thoroughly conversant with the needs of the home and the best methods of conducting the household.

2. *Salaries.*—Adequate salaries should be paid the special teachers of home economics, so that the best young women of the State will prepare themselves to carry on the work that is so vital to the homes. Salaries should be sufficient to make it possible for girls to continue their studies in summer schools and special courses, so that they may keep abreast of all that develops in educational methods and scientific research.

3. *Qualification of teachers.*—The standard for the selection of the teacher should be sufficiently rigid to bar all those who have not had at least two years of special normal training in home economics. Just as soon as conditions in the State made it possible, the high-school teachers of home economics should all be required to have had a complete college course, at least two years of which have been devoted to special training in home economics.

4. *Duties of the teachers.*—The home economics teacher should not be required to teach many other subjects in addition to home economics, for she should be allowed time for preparation and for supervision of students' work. It may be necessary for her to supervise the school lunch and to take charge of extension courses as well. This should be considered when planning her schedule.

5. *Course of study.*—There should be a course of study so definitely outlined that it will insure continuity in the work of the school even when a change in teachers is necessary. A State course of study may be made to answer this purpose if local adaptations are worked out. In counties in which a county supervisor is employed, a county course of study following the outline of the State course may be worked out to meet local conditions. The completion of the course of study should stand for some definite achievement on the part of the students. For example, the first course in foods and cooking should train the members of the class to prepare simple meals attractively, using proper food combinations. The first course in sewing should give the girls the ability to prepare all necessary undergarments, using all the simple stitches and the machine attachments, at the same time giving them a knowledge of choice, cost, and durability of the textiles used. Lack of ability to perform any of the tasks outlined in the course should very definitely disqualify the student for credit and promotion.

School equipment.—A school should not be permitted to introduce a course in home economics unless it is prepared to install an adequate equipment that shall meet the approval of the State supervisor. While a fine type of equipment does not insure good teaching, and some very good teaching may be done with poor equipment, that school is not fair to the teacher that does not provide her with tools for the work. Poor equipment too often works to the discouragement of the teacher and the breaking down of her ideals. Four hundred dollars should be regarded as a minimum sum to spend for the initial equipment in a modern high school. This equipment may vary in type according to the needs and size of the school, but it should be something that is easily cared for and that will furnish, in every way, high standards for household furnishings. Its arrangement and care should in themselves be object lessons to the students. A few essentials should be part of the permanent equipment. Lockers for aprons and good cupboards for supplies and utensils are a necessary part of the equipment. These should all be so arranged that they can be kept locked when necessary. There should be a good stove or stoves and adequate plumbing arrangements to supply water for cooking, washing and scrubbing, and to carry off all waste. Blackboard facilities should be supplied and shelves for books and bulletins with cases for filing records. Class records and, if possible, individual records of work pursued should be kept on file in every school, so that the time of the pupil may not be wasted if change of teacher or of policy brings about a change in courses.

7. *Better maintenance.*—Each school which desires to establish a course should be able to give assurance of a definite sum for its future maintenance for the teachers' salary, necessary replacement of equipment, provision of supplies to be used in practice, etc. This sum should be sufficient to obviate the necessity of imposing a personal fee for the laboratory work of the pupils and should relieve the teacher of all responsibility of resorting to sales and other expedients for supporting the department. The preparation and sale of school lunches may be legitimate part of the course, and if carried on should be self-supporting, but must not be depended upon to finance the entire course.

8. *Reference library.*—Good reference books and magazines treating of home economics subjects should be provided in every school where home economics is taught. These should include standard cookbooks, commercial geographies, textbooks treating of hygiene and food chemistry, work on textiles, vocations for women, etc.

9. *Length of laboratory periods.*—Every school should be required to allow laboratory periods of adequate length—that is, from 90 to 120 minutes. A cooking or sewing period of shorter duration, even though more frequent, means an immense amount of wasted time in the purely mechanical processes of getting ready for work and in putting work away. The laboratory periods should not be put after school hours, nor should they always occur at the end of the school day. If the earlier hours of the day have their advantage for some types of studies, they certainly have for home economics lessons in which both mental and bodily activities are required.

Home economics classes in elementary schools.—In a few of the communities visited the attendance at high school is very small, many of the girls leaving school before they reach high-school grade. In such communities it is most desirable that these girls be given the opportunity to study home making in the lower grades. This could be made possible if the teacher of home economics in the high school could devote her entire time to the subject of home economics, having classes in the grades as well as in high school. These courses should not be introduced until the schools are able to finance them adequately, providing good equipment, assuring sufficient supplies, and paying an adequate sum for the services of the teacher.

Length of courses in home economics.—Until more thoroughly qualified teachers of home economics are prepared in the State, it would seem well to limit the courses in the State high schools to two years. Because of the number of girls who drop out after the ninth grade, these courses should be required in the eighth and ninth grades. The courses required should be full credit courses, five hours per week (three laboratory periods, two lecture periods) demanding outside preparation and practice. The course offered in the eighth grade (first-year high school) should include cooking and housewifery. The course for the second year should take up the subjects of clothing and house furnishing and management. When the schools are organized on the six and six plan, home exercises may well be given in the three years of the junior high school.

At such time as the State shall be able to provide teachers of sufficient training, courses in home economics extending through two additional years should be offered in the high schools. These courses should be optional, but they should be full credit courses.

The high schools of the State should hesitate to introduce courses in home economics which meet the Smith-Hughes requirements unless they are sure these courses are to reach all the girls or that they can furnish teachers for those who are not in the special vocational classes as well as for those who are.

Normal school courses.—The normal schools of the State do well to include a course in home economics for all the women in the normal course, but this course should be made so intensive as to be of real value to the student. Since many young women have entered the normal schools without the previous high-school courses in home economics, the normal courses have not ranked higher than these secondary courses. As high schools give better courses in home economics, and these courses are more general, the normal course should treat the subject from the standpoint of the teacher, placing emphasis upon the educational value of the subject, the methods of presentation, and the relation of home economics to other subjects in the curriculum.

Courses at Montevallo.—The technical courses in home economics carried on at Montevallo for so many years should be continued and should offer to all young women the preparation necessary for intelligent home making. These courses should continue to be correlated with the courses in general science in order to make that preparation as broad as possible.

Since Montevallo has been provided with excellent facilities for teaching home economics and has a plant of sufficient size to develop normal courses as well as to carry on the general preparation for home making, the work there should be strengthened in every way. The choice of teachers should not be limited by small salaries; the courses in science and other related subjects should be built up; sufficient opportunities for practice teaching should be maintained under close supervision; and State needs should ever be kept in mind. Teachers of home economics should be prepared for grade schools, for county high schools, and for district agricultural schools, and the demands that schools of that type make upon the teachers should be constantly considered.

Courses at the State university.—The home economics courses offered at the university should be based upon the high-school courses. The students who enter these courses should have completed the courses which the high schools offer in home economics and be prepared to enter upon college courses in the subject. These courses should deal with the scientific, economic, and social phases of the subject, and should offer opportunity for experimental work.[1]

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[1] For recommendations regarding the establishment of a division of home economics at the Alabama Polytechnic Institute, see Chapter XXI.

Chapter XVI.

HEALTH AND PHYSICAL EDUCATION.

Introductory statement.—Nearly every one knows that the selective draft rejected about one-third of the men as physically unfit for Army service; not so many know why they were rejected; fewer still know how to remedy the defect. An analysis of the causes of rejection shows clearly two things:

1. In most cases the causes of rejection were not recently acquired defects or disabilities, but rather defects and disabilities dating back to childhood.

2. The majority of the defects and disabilities should have been prevented or remedied by proper attention during school life.

A significant reduction in man power is the price the Nation pays for indifference to the physical upbuilding of its children during school life.

In addition to this complete loss through defectives, there is the further fact brought out in the training camps that comparatively few of the men were well trained physically. Much time that was needed for military training had to be devoted to physical development that should have been taken care of during school life.

Comparison of the records of rejection in the different States show that Alabama does not vary markedly from the average. The combined figures of the local boards and the camp surgeons show that 25.79 per cent of Alabama's examined men were rejected as totally unfit for military service. Most of the States run between 20 and 30 per cent, a majority showing under 25 per cent. Alabama also had 8.92 per cent fit only for limited service. Therefore 34.71 per cent of her offered men were unfit for full military service.

It is the purpose of this study of health and physical education in Alabama to point the way, as well as may be, by which the schools may contribute effectively to the physical unbuilding of the children.

It was realized from the first that it is essentially a rural problem. Consequently, it was necessary to concentrate the studies upon rural conditions and rural work as affecting health and physical education.

But it was early found that practically no work along lines of health and physical education was going on in rural Alabama, so that there was no available source from which to draw the facts. It was accordingly necessary to go into the field and gather the facts at first hand.

Methods of procedure.—Two methods were adopted. One was to have a number of children examined in each county, the examinations being conducted by the county superintendents of education, assisted by the local physicians. It was planned to have about 150 children examined in each county, a third of whom were to be colored. April 9 was set for the examination day, and was generally observed.

The examination was reduced to its simplest form, and included only teeth, tonsils, glands, anemia, hookworm suspects, and time lost from school on account of illness. The results are shown in figure 20.

The other method adopted was to select a single county, as nearly typical as possible, and here put on a more intensive study. Chambers County was selected for this purpose, and under the auspices of the county board of education, an expert was engaged for three months as school health supervisor.

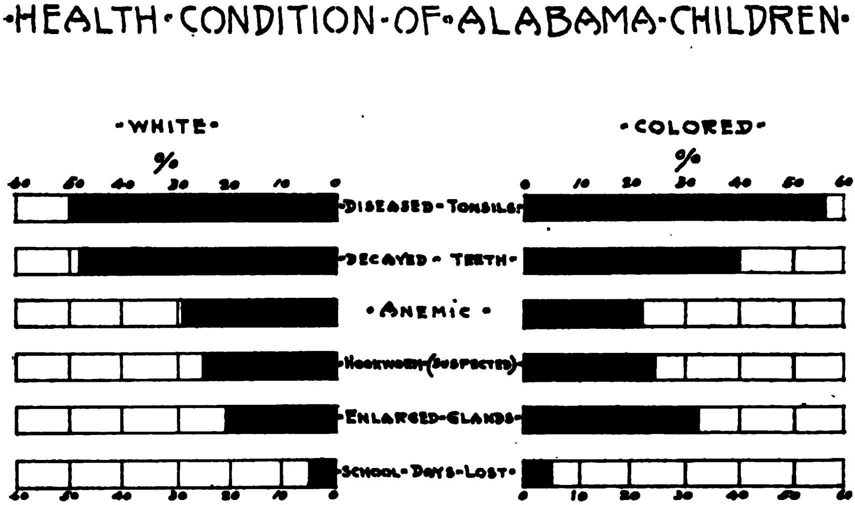


FIG. 20.—These are the results of a health examination of the children in three rural and village schools—2 white and 1 colored—in each county in the State.

I. HEALTH SUPERVISION.

Child conservation involves three phases—the school, the preschool, and the prenatal. It involves the acute communicable diseases, which include measles, mumps, chicken pox, etc.; and the chronic endemic diseases, as malaria; the intestinal diseases, as typhoid and hookworms; the social diseases, as tuberculosis; the diseases of heredity and neglect, as errors of refraction, faulty dentition, diseases of the skin, scalp, etc.; and over and above all of that, it involves not only the *sickness* side, but the *health* side as well, the means and methods of promoting positive health and vigor. A large array of considerations this, the importance of which is quite generally recognized.

It is not only a large array of considerations, but striking at them from various angles is an almost equally large array of agencies, of one kind and another, endeavoring to meet the needs. Among these agencies which are now operating in Alabama, or have operated in the recent past, or expect to be operating in the near future, may be mentioned boards of education, boards of health, tuberculosis associations, woman's committee of the council of national defense, woman's clubs, dental associations, industrial organizations, and private philanthropy. But chief among these agencies are the boards of education and the boards of health.

Specific health functions of boards of education and boards of health.—From the evidence in hand, these two agencies are both hampered in the performance of their proper functions by not having their respective duties and responsibilities in the matter of child conservation clearly defined. While cooperation between the board of education and board of health is at all times desirable, it should be remembered that each has its proper health function to perform in the schoolroom, and that neither can shift the responsibility to the other. The diseases of heredity and neglect belong strictly to the school, and the responsibility can not be shifted. The health department may point out defective teeth, but it is the teacher who has to get the defects corrected and create the spirit of emulation for good, sound, clean teeth. The doctor or the nurse may point out drooping shoulders, but it is the teacher who has to brace them up and keep them braced up from day to day till a habit is formed. In fact, the health department, except in the cities where they have an adequate corps of nurses and doctors, depends upon the teachers for the "follow-up-work," and properly so, for it is not the work of an hour or a day; it is the work of school life to form proper habits.

The best all-round health conservation work in the State, exclusive of the Tuskeegee Collegiate Institute work, is in Birmingham. Here the board of health and board of education have "had it out" and have agreed upon their respective duties and responsibilities. The board of health, it is recognized, has entrée to the schools to carry out its own particular functions, namely—to control the communicable diseases. The board of education, on the other hand, has supervision of the diseases of heredity and neglect, though not defined in so many words. Stated in parallel the line of cleavage in Birmingham is, and should be generally, about as follows:

BOARD OF EDUCATION.	BOARD OF HEALTH.
The diseases of heredity and neglect, as errors of refraction, decayed teeth, accumulations of tartar leading to diseased gums, and pyorrhea; accumulations of wax in the ears; dirty teeth, skin, nails, and scalp;	The acute communicable diseases, as diphtheria, measles, mumps, scarlet fever, whooping cough, smallpox, chicken pox, rabies, cerebrospinal meningitis, infantile paralysis, and so on.

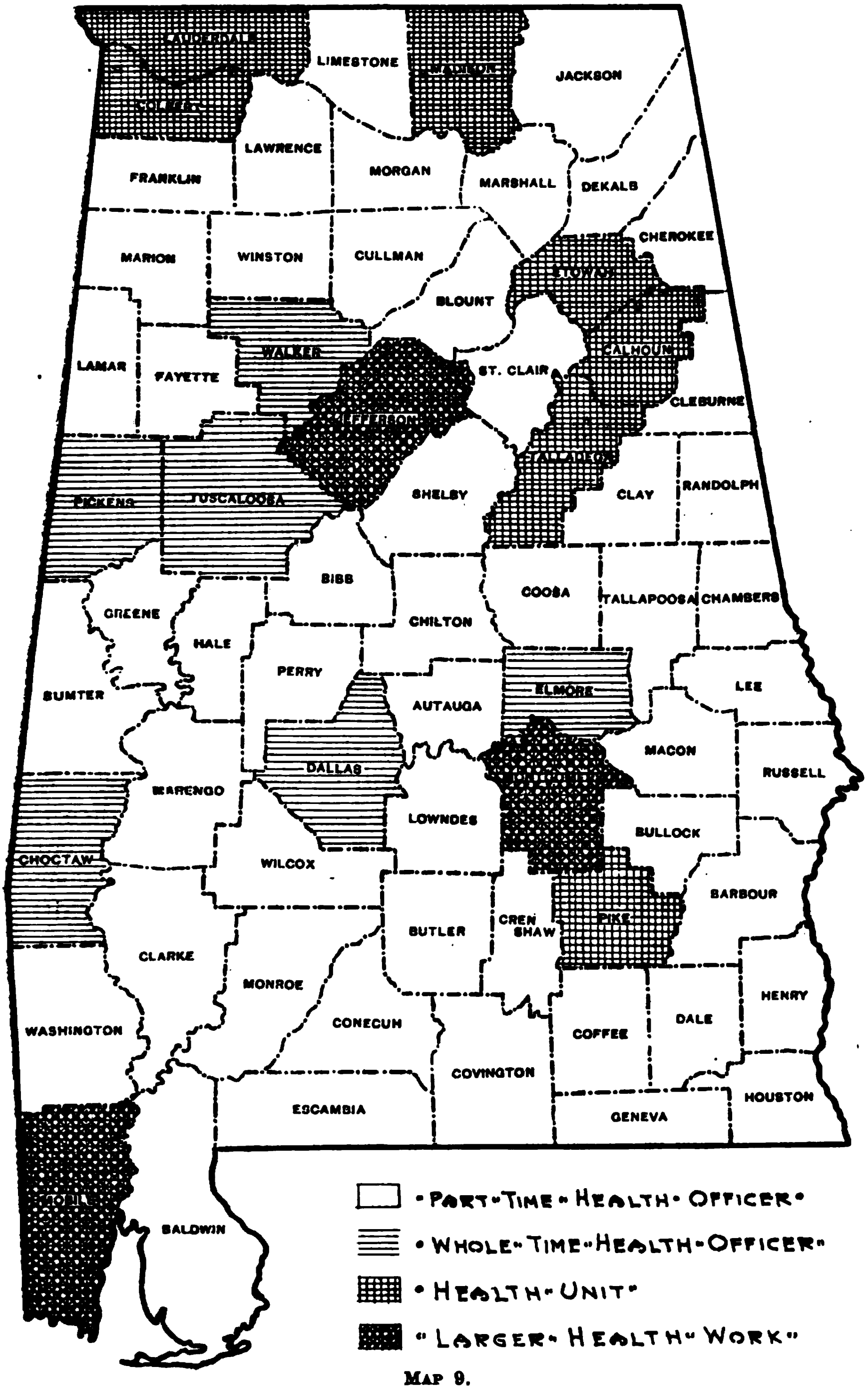
skin parasites, as pediculosis, scabies, ringworm; malnutrition, due to errors of diet, including kind, quantity, and preparation; and errors of habit, as too little sleep, too great activity, etc., postural defects, as drooping shoulders, loose and slovenly gait, etc.	
Nor is it enough to suppress disease—positive health should be promoted—strength, endurance, resilience should be wrought into the fiber of the pupils. To this end physical environments should be considered, such as buildings, including lighting, heating, ventilation, seating, facilities for cleaning, etc.; grounds—including size, condition of drainage, grading, conditions of upkeep; playing—as apparatus, organisation, supervision, etc.	The chronic endemic diseases, as malaria. The diseases of intestinal origin, as typhoid, hookworms, cholera. The social diseases, as tuberculosis, the venereal diseases, etc.
Nor is that all. Actual practice shows that physical defects run in families, so that health supervision can not progress very far before the supervisor and the teachers and pupils, as well as parents, come to think in "family units" and "heredity." It is probable that errors of refraction are generally due to the size and shape of the eye—a purely hereditary trait. Drooping shoulders is not always a matter of habit. Even the oft-quoted high arch and deflected septum may not always be a matter of adenoids.	The above groups are those that belong strictly to the health organization. It will be noted, however, that this line of cleavage leaves unplaced that phase of child conservation extending from conception to entrance into the schools. It is this period that covers the most critical time of existence and calls for prenatal supervision, as in the training of midwives, providing literature for expectant mothers, and preschool supervision covering the six tender years in which the death rate is highest and when disease resistance is lowest. This phase logically belongs to a children's bureau, either independent or as a subdivision of the State board of health.
Again, no sooner do we begin to think of family traits than we take into account mental traits, noting that in some families most or all of the children are particularly bright, in others they are particularly dull, in others they are problem cases of one kind or another. So that it is impossible to separate physical traits and mental traits and heredity.	

It will be noted that the groups are fundamentally different; that the board of health group affects masses. The board of education group affects individuals and families. Effective control of the one is basically a restraining process, of the other a training and breeding process. The one has to do more with prevention, the other with correction and instruction. The one involves intermittent pressure activities, alternately high and low, while the other involves eternally high-pressure activities to achieve the best results.

Present health status in the State.—It would be foreign to the purposes of this report to enter into the workings of the State and local boards of health further than is necessary to make clear the proper relationships between the educational and health organizations; and to make equally clear the line of cleavage between the two.

Efficient health organizations are products of the dense aggregations of population of the cities. In rural communities they are exotics, difficult to get started, and difficult to keep alive. In the State of Alabama, the three counties, Jefferson, Montgomery, and Mobile, with their contained cities, constitute about one-sixth of the

• SHOWING • DISTRIBUTION • OF • DIFFERENT • FORMS • OF • HEALTH • ORGANIZATION •



MAP 9.

population, but they pay for public health purposes six times as much as the 52 rural counties with part-time health officers, and with an aggregate population of over a million and a half. Two-thirds of the population of the State do not have any practical working health organization. And that, let it be borne in mind, is the very portion of the population (the rural) that this study intends to reach. It is patent that if these counties are to have any health supervision in their schools at all, it must be under the auspices of the board of education.

The board of health is proceeding as rapidly as it can with the funds at its disposal, in organizing county health units. About a dozen counties are already organized, or in the process of organization. But that they have a big task awaiting them to control communicable disease is shown by the following brief summary of the status of a few more common communicable diseases.

Malaria.—According to recent estimates furnished by the United States Public Health Service, there are, in the State of Alabama. 157,000 cases of malaria a year, and each one is sick upon average one month. This is over 13,000 years of illness. Compute, if you can, the cost of taking care of 13,000 persons sick with malaria, year in and year out. In computing the cost to the State, not only doctors and medicines, and patent medicines, must be taken into account, but the loss of time. The loss of time alone is over a half million days. It is true that not all the cases are within the laboring age, but many of these require the care of some that are. The disease causes the loss of time, not only of the sick, but also of the attendants. Reduce this last item to its money value and it will be seen that malaria—one disease alone—is costing Alabama more merely in lost time than the State is paying for all its health protection. This means the combined appropriations for the State board of health; for Montgomery, Birmingham, Mobile, and all other cities that have boards of health; for the health units of Colbert, Lauderdale, Madison, Calhoun, and Talladega Counties; for the whole time health officers of Walker, Elmore, and Pike Counties; and all of the part-time health officers of the rest of the State!

Typhoid fever.—The typhoid death rate in the United States has gradually decreased with the application of public health measures. In 1900 the death rate was in the registration area,[1] about 35 per 100,000 of population. This has gradually come down, until in 1916 it was only 13.3 per 100,000 population.

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[1] The term "registration area" of the United States embraces such States as are getting 90 per cent or more of all deaths properly reported, according to State laws; and such cities in other States known as "nonregistration States" as conform to the same requirements but under city laws. The registration area embraces (1910) 70.2 per cent of the whole population, and 44 per cent of the area. The State of Alabama is not in the registration area, but the cities of Montgomery, Mobile, and Birmingham are.

In 1917 the death rate from typhoid fever was 38.2 per 100,000, which is a little higher than the death rate in the registration area of the United States 19 years ago, and nearly three times as high as it was in 1916 (the latest available report).

By the application of well-known laws of sanitation, the death rate from typhoid fever in the United States registration area has been reduced from 35 to 13.3, or about 63 per cent. It is not too much to expect that a similar reduction can be realized in Alabama.

Hookworms.—The hookworm belts the earth in a zone about 80 degrees wide. Alabama is contained wholly within this zone. How prevalent it is may be estimated from the records of the Rockefeller Sanitary Commission which operated in this State from 1910 to 1915; and from the Army records of natives of Alabama who served on the Mexican border; and from the recent State-wide examination. In this State-wide examination some 5,000 children were examined, and the local physicians rated as suspects 27 per cent. Of those that served on the Mexican border, according to figures quoted by Dr. McCormick, of Mobile, 60 per cent were infected. The Rockefeller Sanitary Commission examined microscopically 53,643 persons, of whom 23,403 were found to be infected. These examinations were made in all counties in the State except Coffee, Conecuh, Escambia, Perry, and Pike. The Army records, coming as they do from every walk of life, and representing the ages chiefly between 21 and 31, ought to give a fair average of its prevalence at that age. But it should be remembered that hookworm infection is a disease of barefoot age; that the infection reaches its maximum of intensity somewhere between 10 and 15 years of age; and that after the habit of constantly wearing shoes becomes established there is an automatic tendency to recover; and it should be remembered, further, that these men in the Army had long since been inducted into shoes. The evidence, therefore, is that the rate of incidence among the soldiers is considerably less than among the children and youths. Upon the whole, it seems more than conservative to estimate that one out of every four children of school age in the State is infected. From which it is seen that there are some 140,000 children of school age suffering from hookworms in some degree or other.

The hookworm disease, like typhoid fever, is preventable, and like typhoid fever is prevented by proper disposal of human waste.

Tuberculosis.—Tuberculosis may be called a social disease. It is probably the best yardstick we have for measuring general social conditions. Its death rate is influenced by poverty, housing conditions, alcoholism, nutrition, industrial environment, occupations, the communicable diseases, such as measles, pneumonia, whooping cough, and chronic endemic diseases, such as malaria, and above all, by that group of troubles which may be roughly classified as diseases of heredity and neglect.

The death rate from this disease in Alabama in 1917 was 147; for the registration area of the United States in 1916 it was 141. It is to be noted in this connection that Alabama is not a tuberculosis health resort, as are some other States, e. g., Arizona, California, Colorado, and New Mexico. Many people gravitate to these health resorts and die every wear, and their deaths are charged to the city or State in which death occurs. The death rate for Alabama is probably actually lowered by this gravitation to health resorts. These facts, taken together, would seem to indicate that the general conditions that make for tuberculosis are rather worse in Alabama than in the registration area for the United States.

Venereal diseases.—The number of cases of venereal disease in Alabama is unknown. The most reliable estimate is based upon figures from the Army. Those figures were obtained as follows: It will be remembered that the local boards rejected the halt, the lame, and the blind (this was the custom at first), accepting only those that were locally rated as "fit." After the culling process had been completed, those accepted were sent to camp. Here these select men were examined, and it was found that the venereal disease rate of the men from Alabama was 8.68 per cent, second highest in the United States, being surpassed only by Florida. (See leaflet issued by the U. S. Public Health Service.)

Recommendations concerning the State board of health.—It is obvious from this summary that the State and county health boards have a gigantic task in the control of these and other communicable diseases. It is equally obvious that there can be no full and adequate control of the health of school children until the State and county health authorities are financed in a way to enable them to control effectively the communicable diseases. It is this fact that justifies this survey in making this brief recommendation relative to the State board of health. The recommendations for the State board of health are more of intensity than kind. One of the chief functions of the board is to foster local health organizations. This it is doing as thoroughly and rapidly as its funds will permit. The appropriation that the board is asking for, $150,000, though it is a great advance over its present appropriation, is very modest when compared with the needs and with what some of its neighboring States are doing. Florida, for instance, with only one-third the population of Alabama, devotes $150,000 to public health. It is to be hoped that the legislature will see its way clear to give the State board of health financial support commensurate with the importance of this branch of government. And here is work in plenty for the health organizations, even when they attain their full vigor.

The work in Chambers County.—Before proceeding to a consideration of diseases of heredity and neglect, it is needful to review the findings in Chambers County, for it is upon them that much of the information rests. The first school check up was the Lafayette school. It was found that, physically, the children rated especially well. So well, in fact, that it seemed more than accident. See figures 21 and 22, comparing heights and weights of the Lafayette children with the norm. In making this first comparison, the sexes were not separated and the norm here referred to was arrived at by taking the mean between the sexes of the norms compiled by the Children's Bureau. In later studies, the sexes were separated, but the mass results were not changed. Seeking the cause of the physical superiority of the children of Lafayette, it was recalled that the manager of the cotton mills at Lanett had said that his help was recruited from the farms; that it is the less prosperous farmers that gravitate to the mills; that the prosperous farmers remain on the farm, while those that find the farm too rocky a road are the ones that decide to try the mills. Was this physical superiority of the Lafayette children due to this process of segregation? Had the less fit gravitated to the mills and left only the stronger at Lafayette? Inquiry was instituted and it was learned that there are few or no white tenant farmers in the Lafayette region. Further inquiry elicited the fact that the white people in that section are

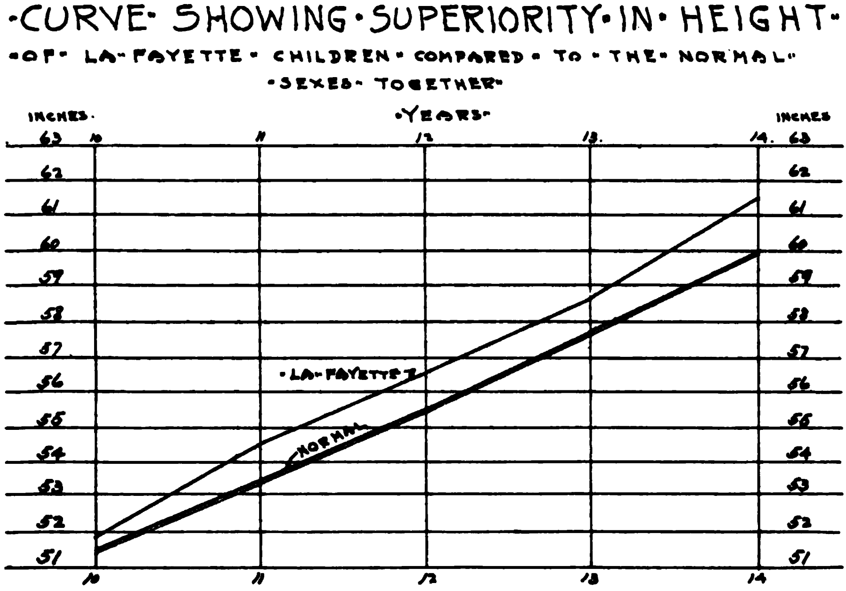

FIG. 21.

generally prosperous and substantial. One man who had been in business there for two years stated that this was the only place he had ever seen where he would be willing to take any white man's note.

If this process of segregation was the true explanation of the physical superiority of the Lafayette children, it necessarily followed that there would be found a corresponding physical inferiority at the mills. The Shawmut mill, built in 1918, was next examined. The differences in weight are too pronounced and uniform to be accidental. The same scales were used, and, age for age, the children of Shawmut are not so heavy as those of Lafayette. Their heights were also compared. The conclusion is obvious—the children of Shawmut are not so tall as those of Lafayette.

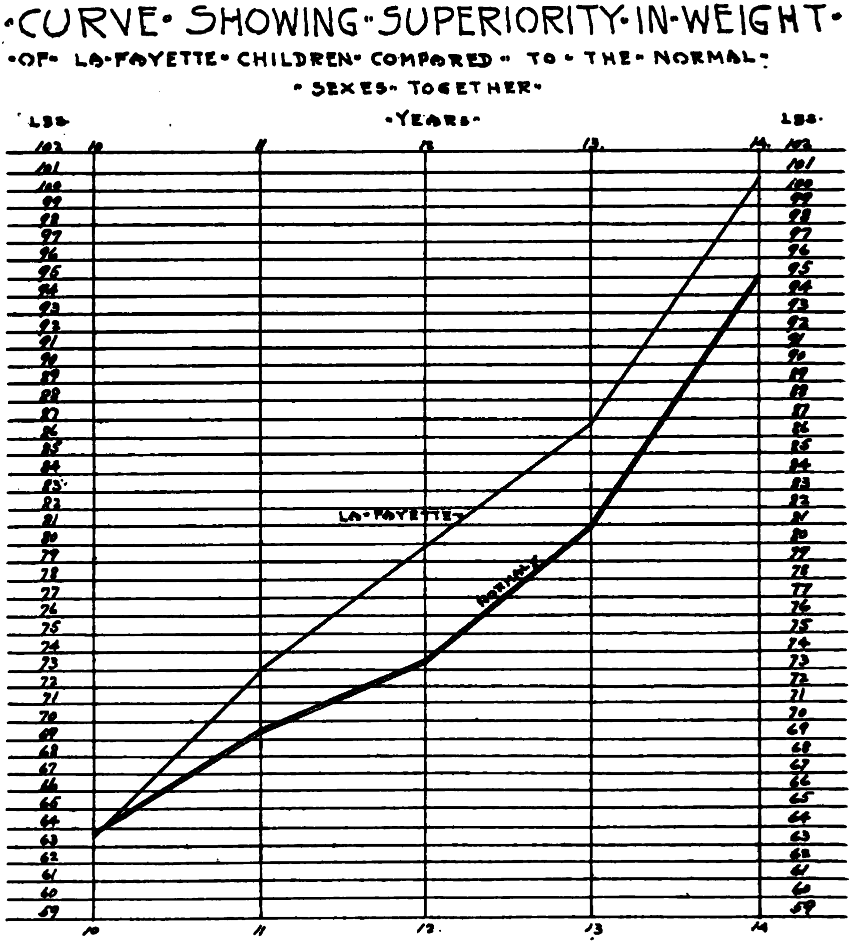

FIG. 22.

Comparison of La Fayette children with Shawmut children, as to weight and height.

Ages of children.	Average weight, in pounds.		Average height, in inches.	
	La Fayette.	Shawmut.	La Fayette.	Shawmut.
Ten years of age	68.7	59.4	51.80	50.50
Eleven years of age	73.0	71.4	54.55	52.89
Twelve years of age	79.7	73.4	56.58	55.45
Thirteen years of age	90.4	81.0	58.68	56.40
Fourteen years of age	100.5	95.0	61.48	58.80

That there is physical inferiority of the mill population has been generally recognized. The cause of it has been ascribed, by common consent and in the absence of evidence to the contrary, to the deleterious influence of the mills. Dr. Foght has shown, in the case of certain mills studied in South Carolina Bulletin, 1919, No. 6,[1] that the inferiority existed prior to coming to the mills. Dr. Foght's method of study was by individual inquiry and tracing the cases back to their previous homes. These observations in Chambers County were made without knowledge of these studies, and were based upon a study of averages, rather than by individual inquiry; and yet the same conclusions were reached, namely, that this inferiority existed prior to coming to the mills. The conclusion is therefore irresistible that the mill did not produce the underweightness and underheightness of the children.

With the fact of physical inferiority before coming to the mills disposed of, it is pertinent to inquire what actual effect the mill environment has upon these children. Is their physical condition further impaired; does it remain stationary; or does it improve after a few years or a generation? Fortune favored the investigation in that there are mills of several ages. The Shawmut mill above referred to was built in 1908. Its population is not so stabilized as the older mills. The Lanett mill, built in 1893, is now 26 years old. The population is fairly well stabilized, not more than 10 per cent at the present time being of the floating type. The Langdale mill is the oldest of the group, but it is small and does not lend itself well to the study of averages.

It should be noted that the children here studied have never worked in a cotton mill, and that among them are a negligible few whose parents are not even connected with the cotton mills. It should be noted further that above 14 years old complicating factors arise, such as untimely dropping out of school. Accordingly, comparisons are based upon the 5-year group including 10 to 14 years of age, where numbers are largest and where comparisons can be made with most uniformity. The Lanett school, 26 years old, was next examined, and the results compared with Shawmut as follows: At 10 years old, the average height of the children at Lanett, the older mill, is nearly 2½ inches greater than the children at Shawmut, and this difference is maintained with a fair degree of uniformity to 14 years of age. (See figure 23.) Weights: At 10 years old, the children of the older mill, Lanett, average 1 pound heavier than the children of the new mill. They practically come together at 11; at 12 the older mill children are again the heavier; at 13, there is over 4 pounds difference, and at 14 there is over a pound difference, all in favor of the older mill. (See figure 24.)

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[1] A Half-time Mill School. By H. W. Foght. Washington, Government Printing Office, 1919. (U. S. Bureau of Education. Bulletin, 1919, No. 6.)

•CURVE• SHOWING•SUPERIORITY•IN•HEIGHT•
•OF•CHILDREN•OF•OLD•MILL•(LANETTE•)•OVER•CHILDREN•OF•NEW•MILL•(SHAWMUT)•
•SEXES• TOGETHER•

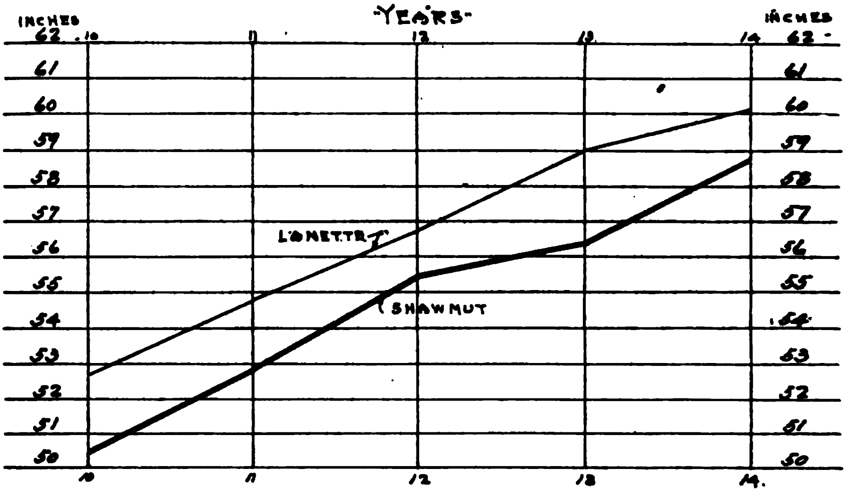

FIG. 23.

Separating the sexes and eliminating extremes did not in a single instance change the results. The mass facts are, first, that the children of LaFayette, year by year, are taller and heavier than the norm; second, that the children of Shawmut (the new mill) year by year, are not so tall and not so heavy as the norm; third, that the children of Lanett, the older mill, are taller and heavier than the children of Shawmut, the newer mill.

Comparing now the two old mills, Langdale and Lanett (see figures 25 and 26), it is interesting to note that, in spite of the erratic curve of Langdale (the smaller school), there is no essential difference in height and weight, and that both of them play round and over the norm. All of which, taken together, suggests that the limit of improvement under present conditions has been approached if not indeed reached, and that no further improvement in height and weight can be expected till some new factor has been introduced.

Diseases of heredity and neglect.—Passing now to the " diseases of heredity and neglect " let us take the eyes. Of the total number of Army rejections we learn that 21 per cent of the rejections in the first draft were based upon eye troubles. The total rejections were, it will be remembered, about one-third. Twenty-one per cent of these rejected for eye deviations of one kind or another would mean that 7 per cent of our population is suffering from some form of eye trouble of sufficient seriousness to disqualify them for military duty. These deviations from the normal consist mostly of errors of refraction. These " errors of refraction " consist of near-sightedness, far-sighted-

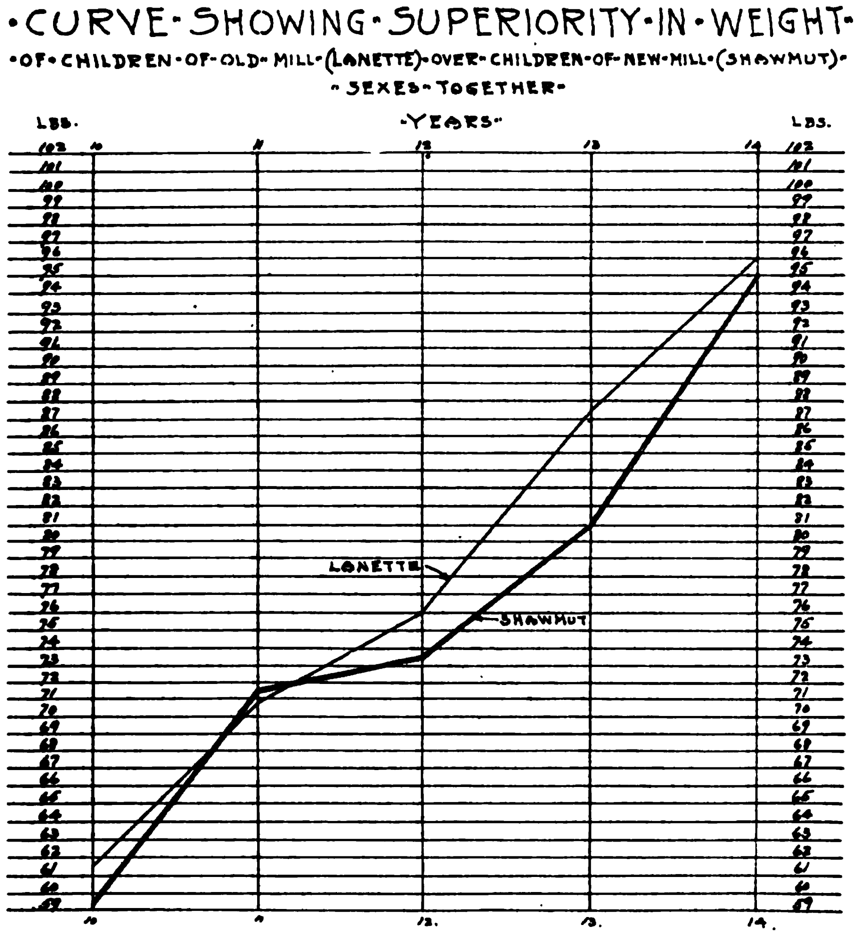

FIG. 24.

ness, astigmatism, and so on. Translated into common English they mean that the pupil can not see as well as he should. Sometimes it is one eye, sometimes both. If one eye is fairly good and the other eye out of "kelter" the good eye does the work, while the other literally goes to sleep on the job. Actual blindness of one eye frequently comes from disuse, owing to an "error in refraction." Many children examined in Chambers County have actually lost the vision of one eye through disuse. Some have not quite lost it, but almost, visual acuity ranging around 2–20 to 8–20. Another point not generally understood, when a person loses the vision of one eye, so that there is nothing to give it direction, it is likely to go "crossed."[1] Most cross-eyed persons are blind or nearly so in one eye. If these cases

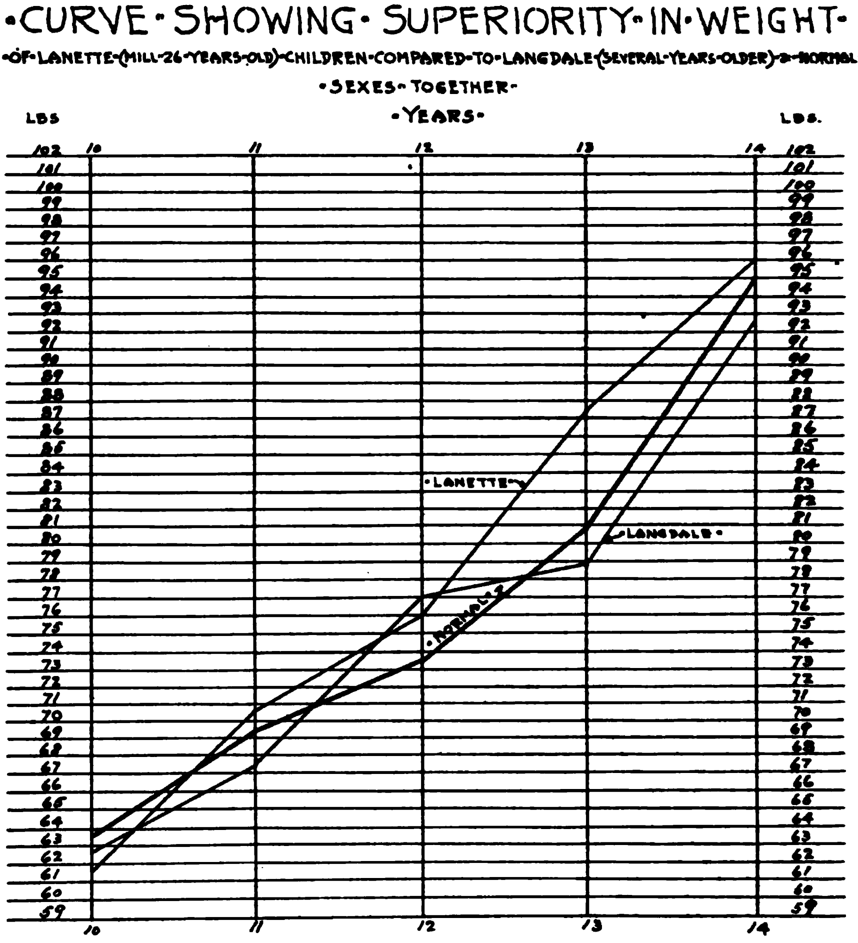

FIG. 25.

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[1] When crossing is due to inequality of muscular tension, vision may or may not be involved.

are taken in hand early, and proper glasses adjusted, the defective eye will be brought into use and the vision preserved and ultimate crossing averted.

The only statistical records of eye defects available in Alabama are those collected in Chambers County during the survey. These cover 1,639 cases, tested with the Snellen test type.[1]

This test is admittedly faulty, in that it takes no account of accommodation. A slight error of refraction therefrom will not be detected. On the other hand severe cases will be detected.

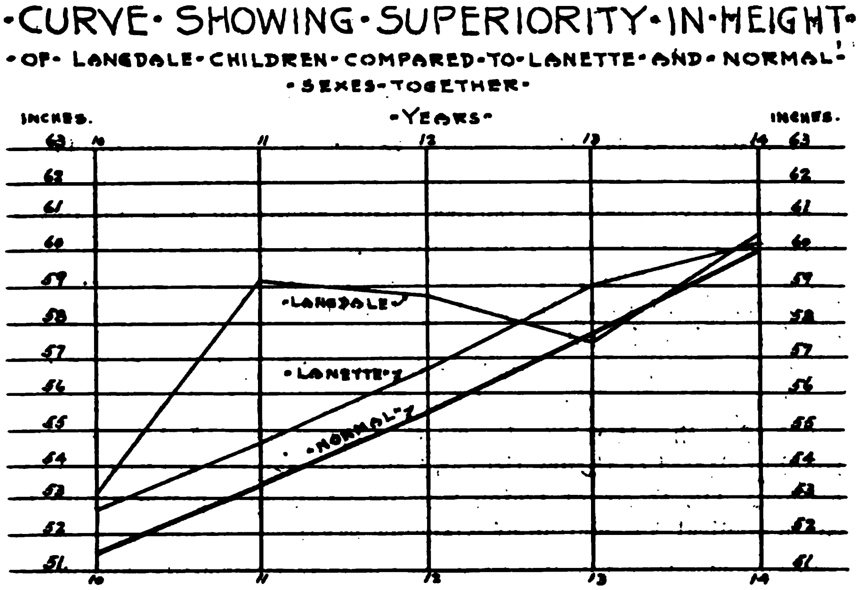

FIG. 26.

Children that tested 20/20 in both eyes were known as Class I, those testing 16/20 in the worst eye were known as Class II. Those testing 12/20 or worse in the worst eye, were known as Class III.

Class I.	Class II.	Class III.	Total
714	609	316	1,639
43.6 per cent	37.1 per cent	19.2 per cent	

From the above it is seen that practically one out of every five children has an error of refraction so great that accommodation will not overcome it, so great that an oculist should be consulted.[2]

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[1] This test is based upon the assumption that the normal eye reacts to light from an object equal in size to a 5-minute arc of a circle. The letters are arranged in various sizes from a 2½-minute arc (at 25 feet) up to 50-minute arc. The card is hung on the wall where it is well lighted, and the pupil stood at a measured distance of 20 feet, while the eyes are tested one at a time, the other being covered, but not closed. If the pupil can accurately read the letters of the 5-minute size at 20 feet, his visual acuity is rated 20/20. If on the other hand he can not see the letters of that size, but can see the larger letters, say of 10-minute size, then his visual acuity is rated at 10/20, and so on.

[2] This does not differ widely from the Army rejection figures, 21 per cent. Examination of several million children in all civilized countries shows about 20 per cent needing corrective treatment.

And this is a county where, as will be seen later, the superior vision of the children of the older mills actually reduces the incidence rate. If this is a county where, as will be seen later, the superior vision of the children of the older mills actually reduce the incident rate. If this is a fair index for the State, then there are over 150,000 children of school age with vision needing attention. Here is work for school health supervision.

The above classification, it will be noted, is based upon 1,639 examinations in Chambers County.

Comparison of the eyes of the mill children compared with those of La Fayette shows the following results:

	La Fayette.			Shawmut.			Lanett.		
Class	I	II	III	I	II	III	I	II	III
Per cent	43	44	14	23	53	24	46	38	16

In charting Classes I (perfect vision according to test) and II (needing the attention of an oculist), the results are very striking. The examiner was prepared to find the vision of the mill rating lower than La Fayette, but not to find the mill environments actually improving vision.[1]

Teeth.—The teeth are another feature of heredity and neglect of great importance. Eight per cent of the Army rejections were on account of teeth. It is now known that many cases of obscure origin, roughly classed as rheumatism and chronic malaria, are tooth intoxications. Dr. Horn, of Union Springs, Ala., in a paper before the State Medical Association of Alabama, says:

> Our examinations show that 90 per cent of these (the school) children have decayed teeth. Half of the decayed teeth are the first molars, the six-year permanent teeth, and the keystone to the dental arch, frequently decayed beyond repair, while the parents are considering these important teeth as temporary and unworthy of attention. In 20 per cent we find pus pouring from one or more abscessed teeth.

In Chambers County these general conditions are reflected. Not only the teeth, but the gums are attacked. First there is a deposit of tartar on the teeth at the root, and this spreading follows the tooth into the gums. The gums are eaten away before it, so to speak, and it is a characteristic of gum tissue that once gone it does not replace itself. A typical case is a decay on one side, say the six-year molar. On account of the decay, the child ceases to chew on that side. Chewing is nature's process of tooth-cleaning. Hence the teeth on that side become foul, tartar begins to accumulate, the gums are then invaded, they turn red at the margins, and bleed easily, the breath becomes foul, and this is the beginning of that condition known as Riggs disease, or pyorrhea. It is easily prevented, but infinitely difficult to cure or arrest. And once it becomes established each year finds it a little worse, even with the most painstaking care, while if it is neglected, it immediately takes a new start. Ultimately the teeth loosen and come out.

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[1] The following is a suggested explanation: Errors of refraction are due to deviations from the normal in size and shape of the eye. And these it would seem are hereditary traits, just as the color of the eye is hereditary. Certainly, improvement in health and strength and bodily vigor can not affect the size and shape of the eye. But it is conceivable that such improvement might affect the accommodation. Accommodation is affected by means of muscles. If these are given more tone along with the other muscles of the body, accommodation could be correspondingly improved. Now, if accommodation is improved, when relying upon the Snellen test, the eyes will appear improved. In actual practice it is found that eyes show up better in the morning than the afternoon, the reason being that in the afternoon the muscles of accommodation are tired.

Our knowledge of teeth in Alabama rests upon the studies at Union Springs, Birmingham, and in Chambers County.[1]

Dr. Horn quotes statistics showing the proportion of children with defective teeth as follows:

Cities.	Number of persons examined.	Per cent with decayed teeth.
Birmingham	3,880	90
Detroit	56,000	75
Cleveland	4,734	97
Cincinnati	28,411	98
Average	....	90

Comparing these statistics with Lafayette, and remembering that the general superiority here is a case of segregation, it is not surprising to find this superiority reflected also in the teeth. One is prepared to find 20 per cent of the Lafayette children with perfect teeth, notwithstanding only 10 per cent with perfect teeth are to be found in the cities quoted by Dr. Horn.

But comparing Lafayette with the mill, one is rather surprised at the effect of the mill environment upon the children's teeth as revealed in figure 27. This will again be referred to under nutrition.

Nutrition.—Probably the most fundamental thing in connection with the general well-being of children, particularly in their growing period, is nutrition. Even among adults it figures largely in both the causation and correction of disease. Beriberi and pellagra are two notable instances where the weight of evidence goes to show the trouble is at bottom one of diet. In both cases the disease is corrected by correcting the diet. In children, rickets is a well-known disease of malnutrition.

There are undoubtedly other cases in which undernourishment plays an important but more obscure rôle. As has been seen, the children in the cotton-mill villages of Chambers County have teeth that are superior to the less fortunate children of the towns and cities. And this superiority increases with the age of the mill from the newest to the oldest, where it reaches its maximum. The only reasonable explanation of this phenomenon is that it is a question of nutrition during early childhood, when the teeth are in their formative stages. At this time it is unquestionably important for the child not only to be well nourished, but to be getting in its food all the chemical elements necessary for the building up of chemically perfect teeth, hard, flinty, and able to resist decay. Evidence turns up here and there that strongly suggests that a given child was not properly nourished at that time of life, as chalky teeth, for instance, that are too brittle to even carry fillings well. Recently a boy was found with a distinct seamlike line across the outer surface of all his teeth except the eyeteeth, which were later coming. The most probable explanation is that there was some nutritional disturbance when this line was laid down.

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[1] In the State survey only the grosser defects seem to have been taken into account. But in Union Springs, Birmingham, and Chambers County, minute examinations were made.

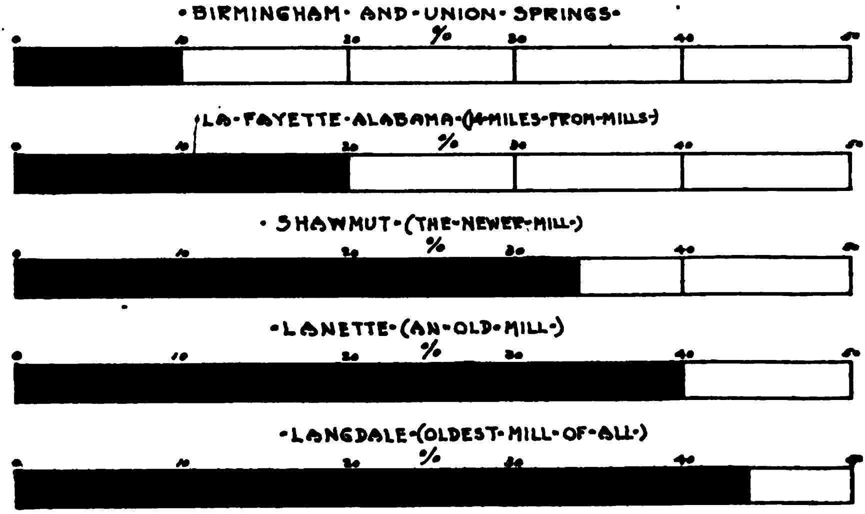

FIG. 27.—Average percentage of children with perfect teeth.

A natural question is: How did the mill operate to improve these children? There are three ways in which it might effect physical improvement in its population:

1. It has been noted that the mill population comes from the less prosperous element on the farm; this is the stratum of society in which hookworms are most prevalent. And again, that hookworms do not multiply in the body; that each hookworm has individually been introduced from without. So that if a child suffering from hookworms be removed to a hookworm-free environment he ceases to get

any new worms. Then the old ones gradually die out, and in the course of time he automatically recovers. Perhaps the life of the hookworm does not exceed six or seven years. In that case the children automatically recover in that time. *The mills offer a hookworm-free environment.*

2. Through the pay check the mill operatives get good wages and have little to spend it for beyond simple apparel and "eats." Many of them save money. A banker at West Point told me that they have 3,000 live bank accounts, and this in a total population of 18,000 people. Some of the mill operatives, he said, have as high as $10,000 on deposit. When the Victory Loan Drive opened, the mills shut down and all got together and went "over the top" in 45 minutes. Some of these people save money and then go back to the farm. These are only fragments of evidence of the general prosperity of the mill operatives, but the state of nutrition and the increasing height and weight of the children are unquestionably proofs that they do feed well.

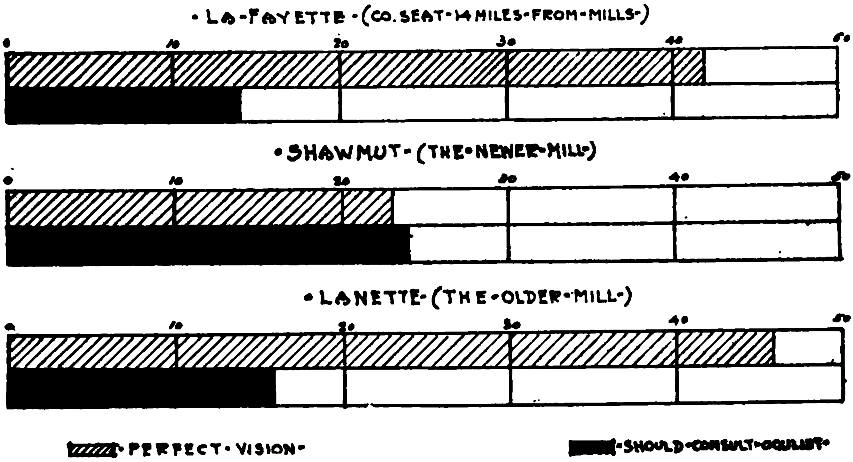

FIG. 28.—Average percentage of children with perfect vision.

3. The mill brings them together and furnishes congenial associations with their kind, which increases the happiness and contributes to their general well-being. There are probably other ways, but these are unquestionable.

These brief studies justify these suggestions:

1. That the physical inferiority of the mill population was acquired before coming to the mills.

2. That it is a case of segregation, the effects of which are reflected not only in the physical inferiority of the mill group but also in the physical superiority of the population left behind.

3. That this physical inferiority, reflected in the premill age where the studies have been made, is, a priori, to be expected.

4. That the mill environments react upon the premill population in a favorable way, as is shown by improvement in height, weight, condition of teeth, and vision.

Further investigation along lines herein suggested will yield results of the first magnitude.

A working plan.—The general plan of school health supervision that has given best results originated in Florida. It is in successful operation in Palm Beach County and other counties in that State. The county board of education employs a health supervisor upon a 12-month basis, furnishes a Ford, with its upkeep, and turns her loose. (Experience has shown that for the successful prosecution of the work a car is absolutely necessary; so much so that in counties where the condition of the roads do not permit the use of a car the work is not recommended.) This presupposes that the health supervisor shall have certain qualifications and training to be discussed later.

The first step in working out the plan was to change from the medical inspection viewpoint, and from the public health nursing viewpoint to the teaching viewpoint. To this end a *teacher* was employed instead of a *nurse* as school health supervisor. This was the original plan in Florida, and the plan followed in this survey in Chambers County, the results of which are partly incorporated in this report and speak for themselves.

The direction.—It was not seen from the beginning the direction that this idea when put into practice would take, the lines along which it would evolve. Turning the idea loose and following its lead, it soon established the line of cleavage between the functions of the board of education and the board of health.

For instance, it is noted that *physical traits run in families.* In one family the children will have especially beautiful dental arches; in another the arches will be uniformly high. In one family there will be found especially good eyes; in another there will be a large number of cases of eye trouble of one kind or another. In one family the children will be straight; in another, drooping, etc. Gradually the idea let loose and its lead followed separated the health conservation problems into two groups: Those diseases for which our neighbors are primarily responsible, and which we call communicable; and those for which we and our parents are primarily responsible, and which we call the diseases of heredity and neglect.

But the idea did not stop here. It was constantly and insistently noted that, among family traits, special mental characteristics are as common as physical. Mental, like physical, deficiencies, may be even classified as those of heredity and neglect; e. g., feeble-mindedness is an instance of hereditary mental deficiency; illiteracy in the otherwise sound mind is an instance of mental deficiency due to neglect. Thus it is noted that both groups, physical and mental, have their roots in heredity and neglect. The idea has step by step drawn together the deficiencies of heredity and neglect, both physical and mental.

Pari passu the idea indicated the special training that the health supervisor should have indicated that she should know how to use "eyes, scales, and a tapeline," and make an intelligence test, and should know something of the fundamentals of heredity.

The results achieved in Chambers County, where the method was introduced for the purpose of this study, will indicate something of its practical working value. Only it should be borne in mind that these results were achieved in five weeks, and that only a portion of the actual achievements have been incorporated in the report; that the great end results are that near 2,000 children in the county have had a due inventory of their deficiencies taken, in which they themselves have helped do the work; and that now they are busily engaged in having the remediable deficiencies corrected.

The procedure has been received by the people of the county with the utmost appreciation. In our last interview, Supt. Barnett stated that it was his program to continue the work, even if he has to reduce the length of school term, say, three days to meet the financial obligations it incurs.

The plan of procedure here proposed has several features to commend it, the following of which may be mentioned:

1. Simplicity. It involves no new legislation. The county boards of education have as ample authority to engage a health teacher as a teacher of mathematics.

2. It harmonizes with the general school organization. Its introduction is without friction, without a jar of any kind.

3. It harmonizes with the board of health. The line of cleavage shows where the duties and responsibilities of the two government units meet. It disposes of duplication of work, and leaves each to develop along its own lines, each unhampered by the other—the one developing the *teacher* idea, the other the *policing* idea.

4. It provides at once a workable method for taking advantage of the recent Army developments in intelligence testing, the importance of which can not be overestimated.

5. In providing a State-wide standardized program it will enable the findings in one part of the State to be compared with findings elsewhere, and will thus lay the foundation for the final solution of some of our social problems. The findings in the cotton mills during this brief period hint at what lies beyond.

Résumé of recommendations.—1. That the line of cleavage herein proposed be established as defining the recognized functions of the boards of education and health, respectively.

2. That each county board of education employ a school health supervisor upon a 12 months' basis, and furnish her a car with its upkeep.

3. That the State department of education engage the services of a State school health supervisor to organize, supervise, and direct the work in the several counties. He should have a broad medical knowledge, with a sociological turn of mind and a pioneering spirit of investigation in order to get best results.

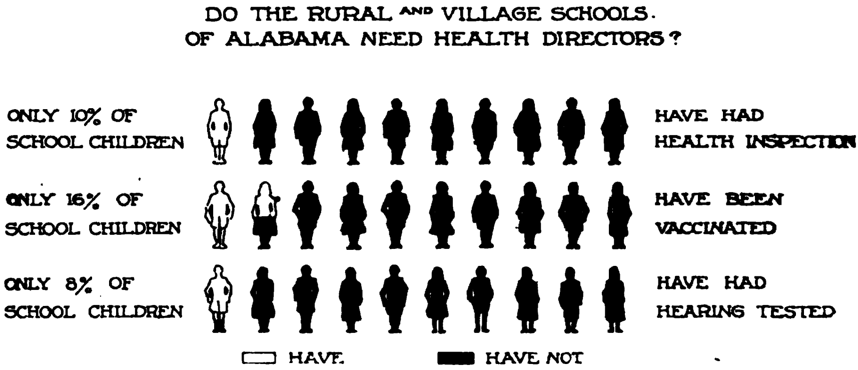

FIG. 29.

II. POSITIVE PHYSICAL EDUCATION.

The preceding pages have dealt with the problems of preventing and remedying disease and defect. Quite as significant is the positive work of physical education, the aim of which may be defined as:

> More fully and thoroughly to prepare the boys and girls of the Nation for the duties and responsibilities of citizenship through the development of bodily vigor and endurance, muscular strength and skill, bodily and mental poise, and such desirable moral and social qualities as courage, self-control, self-subordination and obedience to authority, cooperation under leadership, and disciplined initiative.

The essentials are: Systematic course of physical training activities adapted to the age and strength of the children; skilled and competent direction by teachers and supervisors; adequate material facilities in the way of playgrounds, athletic fields, and equipment. Indoor gymnasiums are necessary only where and when climatic conditions make out-door exercise impracticable, or in cities where outdoor space can not be had.

It must be understood that "physical-training activities" include calisthenics, gymnastics, marching exercises, and organized play games and athletics. No greater mistake can be made than to identify these things with "recreation," in the sense of diversion and amusement. They are the solid substance of physical education as defined below.

It was unnecessary to make extensive investigation of physical education in this survey. The ground was sufficiently covered in the survey of Child Welfare in Alabama[1] conducted by the National Child Labor Committee in 1918.

In the section on playgrounds and play equipment in the chapter on education (pp. 81, 82), it is stated that the grounds and equipment for organized games and athletics both in urban and rural schools are wholly inadequate, and that supervisors are rarely employed. The sole exceptions are the schools supported in whole or in part by the large corporations.

The matter is more extensively treated in the chapter on recreation, but with no modification of the conclusion stated above.

Recommendations.—There should be enacted a modern physical education law for the State. During the past four years 13 States have enacted laws providing for State-wide physical education. The following summary of the legislative provisions necessary for an effective system of physical education is based upon this recent legislation:

1. A clear statement of the purpose and subject of the law.[2] (*See* N. Y., N. J., Calif., R. I.)

2. Provision of administrative machinery in the State department of education sufficient for the effective administration of the law. This provision should be broad and flexible Two things are essential:

   (*a*) State direction and supervision. The best plan is a State director of physical education with the rank of deputy or assistant State superintendent. His powers and duties must not be narrowly defined. (N. Y., Calif., Md.)

   (*b*) Sufficient financial resources to insure the effective administration of this office, either by specific appropriation or by authorizing the State department to make adequate appropriation for this purpose out of the general school funds.

3. Provision for the continuous physical education of all children and youth of school age (6–18) in the State:

   (*a*) All children in all grades and departments of the public schools.

   (*b*) All children in institutional and private schools. (N. Y., R. I.)

   (*c*) All students in normal schools and other schools in which teachers are trained. (N. J., Calif.)

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[1] Child Welfare in Alabama. An inquiry by the National Child Labor Committee, under the Auspices and with the Cooperation of the University of Alabama. Edward N. Clopper. Published by National Child Labor Committee, New York, 1918.

[2] See Bu. of Edu. Bul., 1918, No. 40. Recent State Education for Physical Education.

(*d*) All boys and girls of school age in industry. This may be secured by extending the continuation school program so as to make physical education obligatory up to 18; or it may be secured by recognizing and crediting such agencies as municipal playgrounds, Boy Scouts, Young Men's Christian Association. Attempts at precise definition in the law should be avoided. It should be left as an administrative problem under general authorization. (N. Y.)

4. A minimum time requirement for physical education of one hour each day. It should be explicit that this is the minimum and that school authorities are encouraged to increase the time devoted to play, recreation, and athletics outside the regular school hours. For children in the higher grades and in industry, activities that are approved by the State director of physical education as equivalent to prescribed courses in physical education should be accepted as fulfilling, in whole or in part, the time and quality requirements in physical education.

5. There should be a carefully drawn provision authorizing and requiring the employment of supervisors and special teachers under specified conditions and in harmony with the administrative organization of the State. A State with a county unit organization would require county supervisors; one with supervisory districts would require district supervision. City systems would require both supervisors and special teachers—the latter for intermediate and high schools at least. By specified conditions is meant that a supervisor should be required for a given unit of school population, the size of the unit to depend upon density of population.

6. Provision for State aid to county and local authorities in part payment of the salaries of supervisors and special teachers. (N. Y., Nev.)

7. Provision requiring the State department of education to fix qualifications of supervisors and special teachers and to issue special licenses for the same.

8. Provision for adequate physical education in the preparation of all teachers, both for the secondary and the elementary school. The essential requirements of this part of the teachers' education should be prescribed by the State authorities.

9. Special provision for training regular class teachers already in the service in order that they may do their essential part in the program of physical education. (N. Y., N. J.)

10. Provision requiring that pupils be graded in physical education as in other school subjects and exercises and that satisfactory progress in physical education be a condition to promotion and graduation. (N. J., Calif.)

11. Effective provision for coordinating medical and sanitary supervision of schools with the physical education. Otherwise such essential factors in a complete program of physical education as detection and correction of defects and sanitary conditions of grounds, buildings, and equipment will be neglected. Most States having medical inspection laws will need to revise and extend them. In States having no such laws the enactment of medical inspection and physical education laws should be worked out so as to insure effective coordination.

12. If, as in some of the laws already enacted, reference is made to military training, the interrelations should be clearly recognized. A system of physical education worthy the name must include all the essentials of premilitary training; development of sound physical condition, training in care of one's physical self, training in cooperation, respect for discipline. Drill in tactics and the manual of arms can not be accepted as a substitute or equivalent for the course in physical education. If military training is authorized in the law, then the State director of physical education should be authorized and required to pass upon the value of any proposed plan of military training and to accept it as substitute for physical education only in so far as it includes the health, vigor, and endurance-producing features of the physical education program.

The items in this program of most immediate importance in Alabama are those relating to State direction and supervision—Section 2 (*a*) and (*b*). A competent State supervisor will work out the details of legislation needed in the State. The salary must be sufficient to command a broadly educated and experienced man; $3,500 a year should be the minimum.

Chapter XVII.

HOME AND SCHOOL GARDENING.

Productive educative employment for town children.—About one-fourth of the children of Alabama live in the 46 cities listed as having a population of 2,000 or more, and a considerable per cent in the remaining 231 incorporated communities and mining and mill villages in which many of the features of urban life are found. For these children especially it is desirable to know of their out-of-school occupations.

Present occupation of the child.—To determine what occupations of the city and town school children have taken the place of those of the rural districts, teachers of the four upper grades of grammar schools were asked to make a tabulated list of the occupations, earnings, and home employment of the children, both during out-of-school hours and in vacation. These lists were compiled very carefully and fully by the teachers. For purposes of comparision, the cities which reported are divided into groups as follows:

1. Cities of over 25,000 population—3.
2. Cities of 10,000–25,000 population—4.
3. Cities of 5,000–10,000 population—5.
4. Cities of 2,000–5,000 population—24.
5. Cities under 2,000 population—62.

Summaries of the reports of children for each class of cities are discussed in the following sections. For the convenience of the reader the figures have been reduced to percentages.

The school year.—In the cities and towns of Alabama the white schools are in session (school year 1917–18) 178 days, and the colored schools 171 days. This leaves, excluding Sundays, a total of 135 days when the white children are not in school and 142 vacation days for the colored children.

The school day.—The city schools are in session on an average of about five hours per day. On school days at least three additional hours might be used for educative occupations, and five hours of vacation days, and yet enough time be left for home work, home study, and play. Occupations interesting and educative are in themselves recreational.

Vocational and avocational occupations.—The school system of Alabama had its inception at a time when nearly all of the people were engaged in agricultural pursuits. The Saturday holidays and the longer summer vacations were planned that the children might help with the planting, cultivation, and harvesting of the farm crops. When the child who lives on the farm is not in school there are always purposeful duties that form habits of industry, and from which knowledge may be constantly gained. With the rise of the cities the same general school plan was continued, except that the city schools are in session a slightly larger number of days each year.

Summary of employment of school children, away from home.—The teachers of the cities and towns of Alabama reported on the occupations of 27,555 school children in the four upper grades of the grammar school. Of the total reported, 23,579, or 85.5 per cent, do not have any gainful occupation away from home during out-of-school hours; and 22,349, or 81.1 per cent, are not engaged in such occupations during the summer vacation. The number of employed in the larger cities is much greater, but the per cent of employment does not vary markedly in the different sized cities, as shown by the following percentages:

Per cent of school children with employment.

Cities.	In out-of-school hours.	In vacation.
In cities of over 25,000	13.3	19.4
In cities from 10,000 to 25,000	17.8	22.3
In cities from 5,000 to 10,000	26.8	21.3
In cities from 2,000 to 5,000	23.1	14.8
In cities with under 2,000	32.0	20.3

The average amount of money earned per week is independent of the size of the city. The average earnings of colored children are about the same as those of the white children. For the total number of children employed an average of $2.74[1] per week is earned during the out-of-school hours and an average of $4.33[1] in vacation.

Occupation of white girls away from home (Table 48).—A very small number of white girls are employed in gainful occupation outside the home. Of the 11,447 reporting, only 299 are so employed in the out-of-school hours and 418 during vacation. The size of the city seems to make little difference in the per cent employed. The average earnings per week of the girls employed away from home ranges from $1.80 to $2.65 during out-of-school hours, and from $3.52 to $5.69 in vacation. The average amounts received per week are slightly less in the smaller cities than in the larger cities.

White girls at home (Table 49).—The comparatively small number of white girls employed in regular home duties is, without doubt, due to the employment of negro servants in the home. Of the 11,447 white girls reported, 3,877 have home duties. The per cent employed in home work decreases with the increase in the size of the city. The range of percentage employed is from 16.9 per cent in cities of over 25,000 to 76.1 per cent in towns of less than 2,000 population; the per cent of girls paid for home work decreases as the cities decrease in size.

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[1] Average of averages.

TABLE 48.—*Occupation of white girls in gainful employment outside the home.*

Population of cities.	Total number reporting.	Number employed.	Per cent employed.	Average earnings per week of those employed.	Number employed.	Per cent employed.	Average earnings per week of those employed.
Over 25,000	5,941	153	2.6	$2.62	195	3.3	$4.75
From 10,000 to 25,000	1,298	19	1.5	2.65	56	4.3	5.22
From 5,000 to 10,000	1,067	55	5.1	2.40	57	5.4	5.69
From 2,000 to 5,000	2,098	36	1.7	1.80	55	2.6	2.53
Less than 2,000	1,043	36	3.4	1.80	55	5.3	2.53
Total	11,447	299	....	2.25	418	....	4.56

TABLE 49.—*Occupation of white girls at home.*

Population of cities.	Total number reporting.	Number having regular home work.	Percentage.	Average number of hours.	Number who receive home pay.	Percentages paid.
Over 25,000	5,941	1,004	16.9	7.4	784	78.0
From 10,000 to 25,000	1,298	362	27.9	7.3	248	68.5
From 5,000 to 10,000	1,067	526	49.2	7.0	252	47.9
From 2,000 to 5,000	2,098	1,191	56.7	8.5	541	45.4
Less than 2,000	1,043	794	76.1	7.2	225	28.3
Total	11,447	3,877	....	....	2,050	....

Colored girls away from home (*Table 50*).—Of the 3,463 colored girls reported, 487 were employed during the out-of-school hours and 679 in vacation. The per cent of colored girls engaged in employment outside the home increases with the decrease in the size of the city. The percentage for cities of under 2,000 population is much greater than for any other class of cities, although the number of girls reported is too small for the basing of definite conclusion. The amount of money earned ranges from $1.30 to $3.09 per week during out-of-school hours, and $2.33 to $4.06 in vacation. The amount of money earned is usually slightly less in the small cities.

Colored girls at home (*Table 51*).—A very small per cent of the colored girls claim to have regular home duties. The average percentage does not vary greatly in cities of over 2,000 population, but decreases one-half or more in towns of under 2,000 population. The number of hours per week that colored girls are engaged in home duties is about double the number of hours that white girls work at home. In the large cities a much larger per cent of colored girls are paid for home work than in the towns. This per cent decreases with the decrease in population except in the case of cities of from 10,000 to 25,000 population, when it is slightly larger than in cities of over 25,000 population.

TABLE 50.—*Occupation of colored girls in gainful occupation outside the home.*

Population of cities.	After school.				In vacation.		
	Total number reporting.	Number employed.	Per cent employed.	Average earnings per week of those employed.	Number employed.	Per cent employed.	Average earnings per week of those employed.
Over 25,000	1,958	143	7.3	2.22	285	14.5	3.48
From 10,000 to 25,000	457	62	13.5	3.09	108	23.6	2.91
From 5,000 to 10,000	190	54	28.4	1.71	55	28.9	2.38
From 2,000 to 5,000	729	158	21.6	1.47	160	21.9	4.06
Less than 2,000	129	70	54.2	1.30	71	55.0	2.33
Total	3,463	487	....	1.95	679	....	3.03

TABLE 51.—*Occupation of colored girls at home.*

Population of cities.	Total number reporting.	Number having regular home work.	Percentage.	Average number of hours.	Number who receive home pay.	Percentage paid.
Over 25,000	1,958	1,567	80.0	7.0	528	[illegible].6
From 10,000 to 25,000	457	406	88.8	11.2	152	[illegible]
From 5,000 to 10,000	190	183	96.3	19.8	42	[illegible]
From 2,000 to 5,000	729	651	89.3	13.1	82	[illegible].5
Less than 2,000	129	44	34.1	12.5	0	[illegible].0
Total	3,463	2,851	....	....	824	....

Occupation of white boys away from home (*Table 52*).—Reports were received on the gainful occupations of 10,402 white boys, of which number 2,427 were employed away from home, after school and on Saturday, and 3,142 during vacation. The percentage of employed does not vary greatly with the size of the city, although the per cent employed is slightly smaller in the smaller cities. Twenty-three out of each 100 is the number employed during out-of-school hours, and 28 in vacation. The character of the work of boys varies with the size of the city. In the larger cities there is a larger percentage of occupations that take the boys long distances from home, such as selling newspapers on the street, messengers, and helpers in stores. In the smaller towns these employments are engaged in by a few children, while the care of horses and cows, the mowing of lawns, and running of errands for neighbors increase.

The average amount of money earned per week by each boy varies from \$2.70 to \$3.69 in the out-of-school hours, and \$3.52 to \$5.85 in vacation. The amount earned per week is slightly less in cities of less than 5,000 population.

White boys at home (*Table 53*).—The reports on the employment of boys at home are much more significant. There is a constant decrease in the per cent employed with the increase in the size of the city. In cities of over 25,000 population, 23.7 per cent of the boys have home duties, while 76.1 per cent have regular home work in cities of under 2,000. The number of hours of employment per week, however, varies only slightly. The per cent of children paid by parents for home work decreases with the decrease in the size of the cities.

TABLE 52.—*Occupation of white boys in gainful employment outside the home.*

Population of cities.	Total number reporting.	After school.			In vacation.		
		Number employed.	Per cent employed.	Average earnings per week of those employed.	Number employed.	Per cent employed.	Average earning per week of those employed.
Over 25,000	5,320	1,276	23.9	\$3.69	1,742	32.8	\$5.06
From 10,000 to 25,000	1,191	320	26.8	3.62	384	32.2	5.37
From 5,000 to 10,000	977	271	27.7	3.11	311	31.8	5.85
From 2,000 to 5,000	1,887	378	20.0	2.95	487	25.8	3.52
Less than 2,000	1,027	182	17.7	2.70	218	21.2	4.19
Total	10,402	2,427	....	3.21	3,142	....	4.89

TABLE 53.—*Occupation of white boys at home.*

Population of cities.	Total number reporting.	Number having regular home work.	Percentage.	Average number of hours.	Number who receive home pay.	Percentage paid.
Over 25,000	5,320	1,265	23.7	7.5	847	67.0
From 10,000 to 25,000	1,191	328	27.5	9.0	184	56.0
From 5,000 to 10,000	977	491	50.2	7.0	228	46.6
From 2,000 to 5,000	1,887	1,074	56.9	8.0	478	44.5
Less than 2,000	1,027	782	76.1	8.0	201	25.7
Total	10,402	3,940	....	....	1,938	....

Colored boys away from home (*Table 54*).—Of the 2,243 colored boys reported, 763 are employed during out-of-school hours and 967 in vacation. The average per cent employed increases with the decrease in the size of the cities, although the average per cent does not vary greatly in the cities with between 5,000 and 25,000 population. The average amount of money earned per week ranges from \$2.61 to \$4.68 during the out-of-school hours and from \$4.28 to \$6.32 in vacation.

Colored boys at home (*Table 55*).—The record of employment of 2,243 colored school boys was reported, of which number 671 were employed in regular duties at home. The percentage of such employment increases, with the decrease in the size of the cities, as was also the case with white boys. The number of boys paid for work at home decreases with the decrease in the size of cities.

TABLE 54.—*Occupation of colored boys at home.*

Population of cities.	Total number reporting.	Number having regular home work.	Percentage.	Average number of hours.	Number who receive pay for home work.	Percentage paid.
Over 25,000	1,279	250	19.6	12.3	68	27.2
From 10,000 to 25,000	267	79	29.5	8.4	23	29.1
From 5,000 to 10,000	102	47	46.0	14.3	9	19.1
From 2,000 to 5,000	529	260	49.1	11.9	24	9.2
Less than 2,000	66	35	53.0	16	0	.0
Total	2,343	671	....	....	124	....

TABLE 55.—*Occupation of colored boys in gainful employment outside the home.*

Population of cities.	Total number reporting.	After school.			In vacation.		
		Number employed.	Per cent employed.	Average earnings per week of those employed.	Number employed.	Per cent employed.	Average earnings per week of those employed.
Over 25,000	1,279	420	32.8	3.25	562	43.9	4.48
From 10,000 to 25,000	267	123	46.0	4.68	150	56.1	5.05
From 5,000 to 10,000	102	47	46.0	2.61	48	47.0	4.28
From 2,000 to 5,000	529	286	54.0	2.83	288	54.4	4.51
Less than 2,000	66	37	56.0	4.30	39	59.0	6.32
Total	2,243	763	....	3.53	967	....	4.93

Employment at home.—Of the 27,555 children reported, 16,216, or 58.8 per cent, do not have occupations at home. The amount of home employment increases with the decrease in the size of the city in all cases except that of colored girls. The following comparison of classes of cities shows the comparison of percentages for all children:

	Percentage employed.
In cities of over 25,000	35.0
In cities of from 10,000 to 25,000	43.4
In cities of from 5,000 to 10,000	60.4
In cities of from 2,000 to 5,000	63.0
In cities under 2,000	59.8

Personal investigation shows that much of the home work of children is indefinite and irregular. White children are employed on an average of about one hour per day and the colored girls and boys for two hours. In the larger cities the parents often stated that they desired to have their children employed for a part of the time, but that they were unable to find purposeful occupations suited to the age of the child. The amount of home work not only increases in the smaller towns, but also the duties become more regular—duties that must be done at a certain time and in a definite way. Although the amount of work and definiteness of the duties increase in the smaller towns, the percentage of children encouraged by being paid or given a project of their own, from which money may be made, decreases in the smaller towns, especially in those under 2,000 population.

	Percentage receiving pay.
In cities of over 25,000	51.4
In cities of from 10,000 to 25,000	47.7
In cities of from 5,000 to 10,000	34.1
In cities of from 2,000 to 5,000	27.9
In cities under 2,000	13.5

Manual training and domestic science.—Manual training and domestic science have been introduced into some of the city schools. When introduced, however, these subjects have taken the time formerly given to the teaching of academic subjects and the school day has not been lengthened. The shops, kitchens, and sewing rooms are not open during out-of-school hours nor in vacation, and with the exception of a few mining camps and mill villages, no attempt has been made to interest children in shop or domestic science work at the home. So far as could be learned, the introduction of these subjects has done little to furnish any gainful occupation for out-of-school hours by which the child can become an economic factor in the home.

Teaching of agriculture.—The Alabama State law requires the teaching of agriculture in all of the schools.

"*Legal Provision for Instruction in Agriculture in the Alabama Public Schools.*"

1747. *Teaching agriculture in public schools.*—In addition to the branches now taught in the public schools, instruction shall be given in the elementary principles of agriculture, and said subject shall be taught as regularly as other branches are taught in such schools, by the use of a textbook in the hands of the pupils, and such instruction shall be given in all public schools of the State.

Under the law, however, instruction in agriculture has not made the progress in the practical direction hoped for by the legislators. Textbooks on agriculture have been adopted by the State and class lessons in agriculture are given as a part of the regular program in many schools. The school superintendents are unanimous in the opinion that the textbook work can only reach its greatest value when it is supplemented by practical school and home occupation, which should constitute the major part of the work. To combine classroom teaching with practical home and school agricultural projects would vitalize all of the work of the schools. In many of the cities and towns the teaching of agriculture has been largely abandoned because no plan has been worked out to make it practical. As taught at present, agriculture does not furnish city children any definite occupation during the school hour, after school, Saturday, or during the summer vacation.

The Walker County vocational educational bill.—By special act of the legislature in 1915, boards of education of cities and towns in Walker County may establish and maintain vocational and industrial departments in the elementary and high schools. The law states that the city boards of education may furnish equipment and employ special teachers for this work. Principals and teachers are then held responsible for the carrying out of practical vocational employments in a definite way. Each child electing to take up studies in the vocational department is required to perform and report on a definite project. Pupils who select agricultural employment are required to produce for home consumption or for market products which will, in value, represent at current prices, according to their respective ages, as follows:

	Value of products.
Boys 10 to 12 years of age	$10.00
Boys 12 to 14 years of age	20.00
Boys 14 to 16 years of age	30.00
Boys over 16 years of age	40.00
Girls 10 to 12 years of age	5.00
Girls 12 to 14 years of age	10.00
Girls 14 to 16 years of age	20.00
Girls over 16 years of age	25.00

Several schools in Walker County are now being operated in accord with this act, and some very satisfactory results have been obtained. A longer period of experimentation, however, will be required before the merits of the plan are completely demonstrated. The law has many points that commend it as a State-wide plan.

Playgrounds.—At present no adequate provisions are made by the schools or other agencies in the cities of Alabama for educative occupation for out-of-school hours of children. As suggested, such activities, rightly directed, may become recreation, and yet every child should have a certain amount of time for play. The playground space and play equipment in the cities and towns is very meager, as shown by the following report taken from "Child Welfare in Alabama":

> The grounds devoted to play in the cities and incorporated towns are, with few exceptions, wholly inadequate. This is especially true in most of the schools of the larger cities. It is only recently that the attention of school authorities has been directed to this important matter.

A number of schools in the cities of the first class are located convenient to city playgrounds and parks, but such substitutes for school grounds have not proven altogether satisfactory.

One acre of ground is a liberal estimate of the average area of playgrounds in the city and town schools of the State.

Play equipment in urban schools is, as a general rule, as meager as the playground is restricted. Most of these schools are provided with basketball courts and baseball diamonds and equipment for playing these games. There are, however, very few instances on record where the equipment was purchased with any funds secured either directly or indirectly from the school. The purchase money was obtained by subscription from the citizens of the town interested in the school children, and through assessments made by the children on themselves.

A few schools in Birmingham and Mobile have been supplied with the minimum outdoor-play equipment for use of the smaller children. This is true, on a small scale, in a few of the cities of the second class, as Gadsden, etc.

Boys' and girls' agricultural clubs.—Boys' and girls' agricultural clubs of Alabama are conducted as a division of the department of extension of the Agricultural College, Alabama Polytechnic Institute, Auburn, Ala. The boys' and girls' club and demonstration work with women is under the direction of a superintendent of junior and home economics extension. The boys' club work is supervised by five assistant State club agents, and the work in each county is under the direction of the county agricultural agent, who is also responsible for farm demonstrations. These agents are so busy with the demonstration work with farmers that juvenile clubs are often neglected unless the county superintendent of schools and his teachers give active support. In the agricultural club work for girls the superintendent is assisted by a State home demonstration agent and four assistant State home demonstration agents. Women demonstration agents are employed in most of the counties and are held responsible for the carrying out of the work planned for women and girls by the State agents. The State superintendent of junior and home economics extension states that about 70 per cent of the time of these county demonstration agents is given to the organization of girls' clubs. In 35 of the counties the county board of education pay a part of the salary of the demonstration agents. When thus employed the agents must hold a teacher's certificate. Even when employed by the county school department, demonstration agents do not work under the direction of the county superintendent and are not considered an organic part of the education system. In most cases, however, there is a mutual spirit of cooperation.

On May 8, 1918, 21,358 children were enrolled in the boys' and girls' agricultural clubs. Several thousand additional enrollments had been listed on March 1, 1919. The city superintendents of schools report that 346 school girls are enrolled in agricultural clubs, 228 of these are in cities and towns of under 2,000 population. In the public schools 377 boys are enrolled in agricultural clubs, 228 of whom are in cities and towns of under 2,000 population.

Considering only the number of children of the four upper grades of the grammar school who are reported in this survey, about 3.4 per cent of these children are enrolled in agricultural clubs and in cities of over 2,000 population; enrollment in such clubs is 1.2 per cent. This small percentage is to be expected, as the Federal "Smith-Lever" funds are restricted by law to use in the rural districts, although during the war a part of the "Emergency fund" was applied to the organization of clubs in urban communities.

Agricultural and home-makers clubs among the Negroes.—The Negro farm demonstration agents and home demonstration agents work from Tuskegee in the central and southern part of the State and from the Agricultural and Mechanical College in the northern part of the State in organizing boys' and girls' clubs in rural districts. In addition, home-makers clubs for Negro girls and their mothers have been organized under the direction of the county superintendents of education. This work is made possible by money given by the General Education Board and expended through public school officials. In the summer of 1917 the following clubs were organized:

Number of clubs organized	582
Number of girls enrolled	6,774
Number of mothers enrolled	6,915
Total membership	13,689
Number of public demonstrations in canning	937
Number of homes visited	5,290
Number of quarts of fruits and vegetables saved for home use	461,787

Through the Jeanes fund the counties are enabled to employ special industrial supervising teachers during the school year. In the school year 1917–18 thirty such teachers were employed in 26 counties. These teachers visit rural schools, teach elementary industrial subjects, help the teachers with their work, and hold meetings of school patrons to stimulate interest in better schools. These supervising teachers organize and supervise boys' and girls' clubs.

All of the work under the General Education Board and Jeanes funds is supervised by one of the rural school agents of the State department of education and a colored assistant, who are paid jointly by these funds. As is the case with the white children, practically all of the industrial work with the colored children, through the national, State, and private funds, is devoted to rural communities.

United States school garden army.—Since October, 1918, the United States Bureau of Education in cooperation with the State Department of Education of Alabama has furnished a part-time worker to assist in organizing school-directed home gardening in the cities and towns of the State. Since March 1 this worker has given full time to the State of Alabama. Up to May 1, 1919, 20,200 children have enrolled in this out-of-school-hour garden employment, and now it seems that the work for the present season will be highly successful.

So far as could be learned, this is the only State-wide work organized to promote industrial occupation for city and town children. The salary of this worker is paid wholly by the United States Bureau of Education from the National Security and Defense fund. As this fund is available only until July 1, 1919, it is probable that the work will have to be discontinued unless funds are furnished by Congress or the State Legislature of Alabama.

In the cities where this work is being conducted the salaries of the garden teachers are paid by the local boards of education or by local philanthropic agencies that turn the organization and direction of the gardening over to the school authorities.

Relation of idleness to juvenile offenses.—The juvenile court is largely a city institution. While there are cases of dependency and delinquency in country districts, these cases are so few that rural counties seldom establish such courts, the work being handled by the probate judge. Of the 67 counties in the State, only 12 have taken advantage of the State law and appointed an advisory board to assist the probate or juvenile court judge and in only 5 counties have probation officers been appointed. The 5 counties in which probation officers have been appointed contain the 5 largest cities in the State, and 7 of the 12 advisory boards have been appointed in the 7 counties containing cities of over 10,000 population.

It is true that there are dependent and delinquent children in rural districts that sadly need the care of some protective agency. It is a fact, however, that the majority of these cases are found in the city. The juvenile court judge of Jefferson County stated that, of all the cases before his court, not over 2 per cent came from the strictly rural districts.

The fact that children on the farm have definite occupations under the direction of the parents, when not in school, and are thus economic factors to the home, undoubtedly has a direct bearing on the number of cases of delinquency and perhaps of dependency. The lack of productive educative occupation often leads to offenses on the part of the child. The child without regular duties is often "the father of the man without a job." The inability of adults to earn a good living leads to social unrest, plastic material for the molding of I. W. W. and Bolshevistic agitators.

The juvenile court records of Montgomery County were studied for the calendar year 1918 and for Jefferson County for 24 months beginning with April, 1917, and ending with March, 1919. The following records for Montgomery County are taken from the annual report of the chief probation officer, and for Jefferson County they were copies from the well-kept records of the juvenile court judge.

Juvenile court records, Montgomery County, January 1 to December 31, 1918:

Delinquent white boys	167
Delinquent Negro boys	277
Delinquent white girls	31
Delinquent Negro girls	50
Total	525
Delinquent cases continued on probation for the year 1917	59
Total	584
Charges against delinquents:	
Petty larceny	185
Grand larceny	34
Disorderly conduct	234
Immorality	39
Truancy	59
Vagrancy	15
All other charges	28
Total	584
During the year the number of cases of dependent children handled was	159
Continued from previous year	37
Total	196

Jefferson County court record from April 1, 1917, to March 31, 1919:

Number of dependent cases	672
Number of delinquent cases	1,750
Total	2,422
Nationality of delinquents and dependents:	
American—	
Male	905
Female	485
Negro—	
Male	831
Female	124
Foreign—	
Male	64
Female	13
Total	2,422
Age of delinquents and dependents:	
Infants of two years	163
Three to six years	192
Seven to thirteen years	1,263
Fourteen to eighteen years	804
Total	2,422

Employment of children:	
Between ages of 7 and 13	195
Between ages of 14 and 18	335
Not employed (birth to seventh year, 355; from 7 to 18, 1,537)	1,892
Total	2,422
School attendance:	
Regular	713
Irregular	643
Do not attend	579
Total	1,935

From these tables several conclusions may be drawn. The number of boys before both courts is much larger than the number of girls. In the Montgomery County court, of the charges against delinquents, 71.8 per cent are for petty larceny (31.8 per cent) and disorderly conduct (40 per cent). The ages of children were not given in the Montgomery court record, but in Jefferson County 52.1 per cent of the offenders were between the ages of 7 and 13. Many of the records of these offenses were examined and in most cases they were minor offenses that grew out of the play instinct that in the city found no other means of expression. Of the 1,537 cases of children between 7 and 18 years of age, 1,007 did not have any regular employment. From the children's own statements in regard to school attendance, 1,222 either did not attend at all or were irregular in school attendance. With 1,007 children who do not have any employment and 1,222 who are in school a very small part of the time or not at all, is it any wonder that these children commit enough disturbance in the community to bring them to the juvenile court? What group of normal children would not?

School-directed home gardening.—All of the permanent State agencies engaged in promoting industrial education (agricultural and home makers clubs) for children are working in the rural districts. The lack of occupation and meager play facilities on the part of a larger per cent of town children makes it imperative that the State should furnish money for educational occupations adapted to the cities and towns. It is the duty of the State to furnish to all its children equal advantages. Under city conditions the problem is to furnish practical employments of educational value. One such occupation that has proven its worth in several Alabama cities and many cities in other parts of the country is school-directed home gardening.

Available land.—Practically all of the cities of Alabama have been planned on a generous scale and the congested tenement areas found in many northern cities are not present. In few of the cities are the lots as small as 25 by 100 feet. In the suburban section and in the smaller cities and towns, average house lots range from 50 by 150 feet to an acre or more. In all the cities, the school principals and teachers state that enough land is available in back yards and vacant lots so that garden spots can be found for all of the children. In a few of the colored sections the house lots are small, but in many cases the Negro settlements are near the edge of town where there are large tracts of vacant land. Of the total number of white children (21,849 reported) 2,282 live in apartments, tenements, and flats where the yard must be used by two or more families. Of the 5,706 colored children reported, 642 live in flats, tenements, and apartments.

Table 56 shows the number of children who could have plats 20 by 20 feet, 20 by 40 feet, and 50 by 50 feet, or more.

TABLE 56.—*Possibilities of school-directed home gardening.*

WHITE CHILDREN.

Population of cities.	Number of children.	Living in apartments, flats, or tenements.	Can have garden space 20 by 20	Can have garden space 20 by 40	Can have garden space 50 by 50	Total who can have a home-garden plat.	Per cent who can have home-garden plat.
Over 25,000	11,261	1,417	2,508	1,104	1,966	5,578	49.5
From 10,000 to 25,000	2,489	480	631	338	702	1,671	67.1
From 5,000 to 10,000	2,044	118	475	174	862	1,511	73.9
From 2,000 to 5,000	3,985	199	418	804	1,786	3,008	75.4
Less than 2,000	2,070	69	134	560	1,112	1,706	82.4
Total	21,849	2,283	4,166	2,980	6,418	13,564	....

COLORED CHILDREN.

Population of cities.	Number of children.	Living in apartments, flats, or tenements.	Can have garden space 20 by 20	Can have garden space 20 by 40	Can have garden space 50 by 50	Total who can have a home-garden plat.	Per cent who can have home-garden plat.
Over 25,000	3,237	480	631	338	181	1,150	35.5
From 10,000 to 25,000	724	81	115	41	236	392	40.3
From 5,000 to 10,000	292	3	21	82	42	145	49.6
From 2,000 to 5,000	1,258	78	290	427	74	791	62.8
Less than 2,000	195	....	16	....	142	158	81.0
Total	5,706	642	1,073	888	675	2,636	....

As would be expected, the per cent of children who have large home-garden plats increases with the decrease in the size of the city.

The economic value of school-directed home gardens.—A large percentage of the children in the cities and towns of Alabama do not, at present, have any useful employment for their energies. In these cities there are enough unused back yards and vacant lots for every child to have a garden plat. To utilize these two unused assets would have a large economic as well as educative value. It would not be difficult for each child to grow $20 worth of vegetables at present prices. For the 27,555 reported this would mean an aggregate value of over half a million dollars for the cities and towns of the State.

The public-school teachers were asked to estimate the average cost of vegetables, both canned and fresh and including potatoes, for an average family of five persons for one year. No attempt has been made to check these figures by studying grocers' accounts and consulting housewives, as has been done in other surveys. The average of the Alabama teachers' estimates are listed below and compared with results in other cities of the same class where the problem has been studied.

Cost of vegetable foods for a family of five for one year.

Population of cities.	Alabama cities.		Atlanta, Ga.		Elyria, Ohio, white.	Richmond, Ind., white.	San Francisco, Calif., white.
	White.	Colored.	White.	Colored.			
Over 25,000	$130.86	$73.15	$123.22	$102.52			$57.79
From 10,000 to 25,000	136.82	79.06			$133.57	$138.88	
From 5,000 to 10,000	131.55	68.01					
From 2,000 to 5,000	114.46	53.97					
Less than 2,000	86.36	40.50					

The plan.—To put the plan of school-directed home gardening into practice, it will be necessary to pay regular grade teachers an extra salary for work after school hours, on Saturday, and during the summer vacation. In the average school of seven grades (40 to a grade or 160 in the upper grades) only one such teacher will be needed. During the spring planting season, when the work is heaviest and time is limited, it will be an advantage to have two teachers for every 150 or 200 children who have gardens. These teachers should spend their time during out-of-school hours visiting the homes of pupils and teaching them to make back-yard and vacant-lot gardens. The teachers should interest the parents to cooperate with the children and to encourage them by paying for their products. Incidentally this home visiting of the teachers will bring about a better understanding between the school and the home.

The cost.—To put this plan into practice in all the cities of Alabama between 400 and 500 teachers trained in practical gardening will be needed. In a number of cities where the school-directed garden plan is being followed, the teachers are paid $10 per month for the extra work during the school year and $50 per month during the vacation. At this rate the total cost in Alabama for the garden season will be about $200 per teacher, or from $80,000 to $100,000 for all the cities of the State. If, as an incentive to the cities, the State should provide an appropriation to pay half the salary for the garden work, a total appropriation of from $40,000 to $50,000 will be needed. For teacher training and administration of the work by the State department of education, $10,000 additional should be provided.

If by this means the children should supply half the vegetables now used by the families, several millions of dollars would be saved to the city homes. Children could remain in school and yet be producers instead of consumers, as at present. In the age-grade tables (Chapter IV) 21,868 children are given as enrolled in the fourth, fifth, sixth, and seventh grades in cities and towns below 2,000 population, and 26,955 in cities of over 2,000 population, or a total of 48,833 children. As the reports were not received from all towns of under 2,000 population, it is safe to estimate that there are at least 50,000 children enrolled in the four upper grades of the grammar schools of the cities and towns of Alabama. If each of these children produces only $20 worth of vegetables, the total value to the homes would be $1,000,000. This is a very low estimate and might be easily increased to an average of $50 per child, a total of $2,500,000.

The garden teacher.—The teachers suggested for employment during out-of-school hours are designated as garden teachers, so that very definite and practical duties may be assigned. The services of these teachers to the child should be of a much broader scope. Every teacher is aware of the fact that the child back of the book and apparently very much absorbed is dreaming of many things not in the book. He looks at the book, but does not see. In the life of every child there are periods of dominant interests. He is the rancher, the gardener, the mechanic, and the great political and financial leader. His interest at that moment stirs to ambition of great and useful employment. These dominant periods of interest are the opportunities to be seized by the school and used to develop the highest type of useful individual. To give every child an opportunity to taste and weigh the value of his interests as they arise is real vocational guidance. The teacher raps on the desk, the child awakes from his dream with a start. He is in the schoolroom, but he does not find in the school a connecting link between himself and his dream, the ambition of his present interest.

The garden teacher will be a beginning in connecting the life of the child with the school. The height of the garden interest period is about the twelfth year. These teachers should also interest themselves in the many interests of children. They should be close to the life of the children and encourage them to come to them with their interests.

Teacher training.—The city superintendents of schools report 103 teachers now in service who are trained to teach practical gardening. To provide the trained teachers that will be needed for this work, one or more of the State normal schools or departments in State institutions delegated to train elementary teachers should be designated to establish special departments for the training of garden teachers. Of the white schools with normal training departments, the Alabama Girls' Technical Institute at Montevallo is best equipped for this work. Tuskegee and the Agricultural and Mechanical College for Negroes are the two institutions best equipped for the training of colored garden teachers. Both this school and the Alabama Polytechnic Institute should prepare teachers of this subject.

The above discussions summarized.—1. Thousands of children in the cities and towns of Alabama do not have any employment during the time they are out of school.

2. Because of lack of employment these children form habits of idleness rather than of industry.

3. Many children, because of lack of employment, commit offenses against the laws and peace of the State.

4. There are many distinct agencies working, through or outside of the schools, to promote out of school employment of rural children; but at present there are no permanent agencies working to promote the educational occupational employment of city children.

5. School-directed home gardening offers a most practical educational employment for city children.

6. There is much land available for gardening in the cities and towns of Alabama.

7. It would be practicable to employ part-time teachers to promote occupational employment for children during out-of-school hours.

8. The cost of such teachers would be small as compared with the money value of the product, and the educational value would be incalculable.

9. Since the occupational employments of children are educative, their direction is a function of the public schools.

10. The normal departments of the Alabama Girls' Technical Institute and the Alabama Polytechnic Institute should train white garden teachers, and Tuskegee and the Agricultural and Mechanical College for Negroes should train colored garden teachers.

11. In the interest of efficiency and economy all occupational employments (club work, home demonstration work, and city gardening) should be an organic part of the educational system of the State.

12. All of the agencies now engaged in the promotion of out-of-school employment activities, both city and rural, should be put under the direction of one person who should coordinate his work with other divisions of the State department of education as directed by the State superintendent of education.

Specific recommendations.—The survey committee recommends that steps be taken to enact legislation or to formulate administrative regulations for—

1. Placing the administration of the educative employments of children, both city and rural, under a single State supervisor, who shall be an official of the State department of education, and who shall be given such associates as may prove to be necessary.
2. Holding the State department of education responsible for the organization of the out-of-school employments of school children.
3. Providing funds to pay the assistant supervisor of educational employment in cities, and half the extra salary of part-time teachers of school-directed gardening in cities and towns.

Chapter XVIII.

THE TEACHERS OF ALABAMA AND THEIR CERTIFICATION.

Effect of the war on the teacher supply.—Alabama can not have a satisfactory system of schools without well-prepared teachers. How to provide an ample supply of professional teachers has always been a difficult problem. In this respect Alabama is not different from other States. The country at large faces the same difficulty; largely, no doubt, because in the United States the teaching profession has not been held in the high esteem that is its due. The average American is inclined to judge people by their money incomes instead of by the type of service they render. Because teachers are so poorly paid, they seldom hold in the community that high social position that is their due by right of the importance of their service to the public. Inadequate salaries and indifferent social status have kept many capable persons out of the profession.

Low salaries generally result in correspondingly low professional preparation. Almost any kind of amateur can gain admittance to the profession by the easy examination route, and thereby discourage more ambitious persons from entering the professional schools and taking expensive training.

Even before the war it was difficult to procure and retain well-prepared teachers. After the country's entrance into the war the problem became greatly intensified. Now is the time, therefore, to drive home to the people what is necessary before better things can be obtained in the field of professional teaching. The public will have to become fully aware of their responsibility toward the teachers; they will have to make the schools and housing conditions more attractive than they now are and in other ways make feasible long, well-paid tenures in the same community. The State must by legal enactment safeguard the profession and offer special inducements to all teachers to equip themselves well for their life work. With this as a basis the teachers will be more willing to strive for higher professional standards.

Teaching rewards should bear a definite relation to the experience and time incurred in securing the teaching certificate and the professional knowledge and skill which come from successful experience.

Salaries ought, accordingly, be based on the type of certificate held. There should in every State be a legal minimum salary for each grade of certificate. Similarly a second year in the same school community ought to be awarded with a State grant of a definite sum; a third year with double the above sum; and the fourth and each subsequent year with treble the first sum. These bonuses should always be in addition to the salaries paid by the school community or county board.

Paradoxical as it may seem at first thought, the remedy for an ample supply of well-prepared teachers should be sought in gradually increased professional requirements of all teachers. While during the war period it was impracticable to legislate against admission to the teaching ranks by the ordinary examination route, the present is probably the right time to look forward to ending this practice as soon as possible. The teacher in the effective community school of the future may be expected to come into service from the professional teacher training schools only. This, together with increased salaries and improved living conditions, will help to dignify the profession and place it on the higher level which it should always have held, but which in recent years seems to have been largely lost to the American teacher.

Who the Alabama teachers are.—Before going deeper into the subject of remedial suggestions it is well to know more about the teachers who are entrusted with the education of the children in Alabama. Who are they? How many are they? What is their preparation for teaching? What is their social status? Are they permanent teachers or mere makeshifts?

Alabama is a large State and requires quite an army of teachers to "man" the 4,712 white, and 2,007 colored schools. The teaching staff consists (1918) of 11,766 teachers, of whom 9,050 are white and 2,716 are colored. The compulsory attendance law has already had some effect on increasing the number of children in school, as may be seen from the fact that the white teachers increased from 8,351 in 1917 to 9,050 in 1918. But during the year the number of white male teachers decreased from 2,359 to 2,025. This loss is largely attributable to conditions occasioned by the war, but it makes the situation none the less serious when one realizes that the number of women employed "was already in excess of a reasonable proportion." Alabama is in real danger of having its schools feminized.

The schools for colored children have increased in number from 2,572 in 1917 to 2,716 in 1918. The small increase in number of schools is probably because the effects of the compulsory attendance were practically neutralized by the continued loss in colored population due to the northward migration.

Married and single teachers.—Twenty-seven per cent of the rural and village teachers reporting are married. This number is somewhat larger than for the United States as a whole. The latter being 18 per cent of the whole number employed, according to a recent study made by the Bureau of Education. The married teachers are mostly older men and not of the type of young and enthusiastic instructor, well prepared and understanding the needs of modern education. The latter type of male teacher and his family can not be attracted to the rural or village school unless permanent community schools with good housing facilities are established for them.

A few of the married teachers are women whose husbands are in Government service. Some of them have proved themselves able teachers. It would be worth while, the committee is inclined to believe, to induce married women—one-time teachers—with grown families to take a short professional course and reenter the profession. A married woman who has gone through the experience of rearing a family can be counted on to understand children at least—and this is more than can be said for some of the young teachers now in the schools.

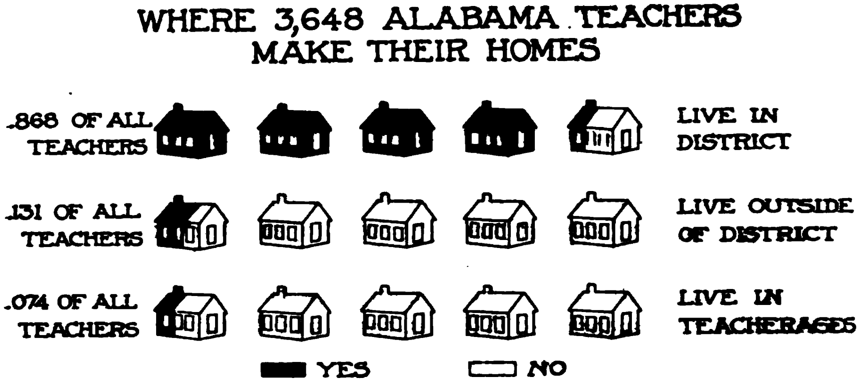


FIG. 30.

Residence of the teachers.—Of the 3,648 rural and village teachers answering the questionnaires only 271, or about 7.5 per cent, live in homes provided by the community; 3,170 board and lodge in the school districts; and 478 spend the school day only in the district, living elsewhere. A teacher who devotes only 6 or 7 hours daily for five days in the week to his school community can mean nothing as a local community leader. Fortunately, this group is small. The teachers who reside in the district throughout the school term are more numerous. But many of them spend the week-end in town—for which it is hard to blame them—at the very time they are needed for the Friday evening literary society or the Saturday evening farmers' club and the Sunday Bible class. But the small group of teachers who are provided with permanent homes are better off. They are strategically situated for community leadership, and if they fail in this important educational work, it is because of in-capacity and unfitness to hold the important teaching office. Every section of Alabama should be encouraged to erect homes on the school premises for their school principal and his helpers.

Lack of permanence in the teaching profession.—Teaching as a profession needs stabilizing, and the opportunities in teaching must be made the equal of opportunities in other callings. Without this neither Alabama nor any other State can expect any large number of well prepared, experienced men and women to go into the teaching profession and remain there.

PERMANENT AND MAKESHIFT TEACHERS
(3,648 TEACHERS)

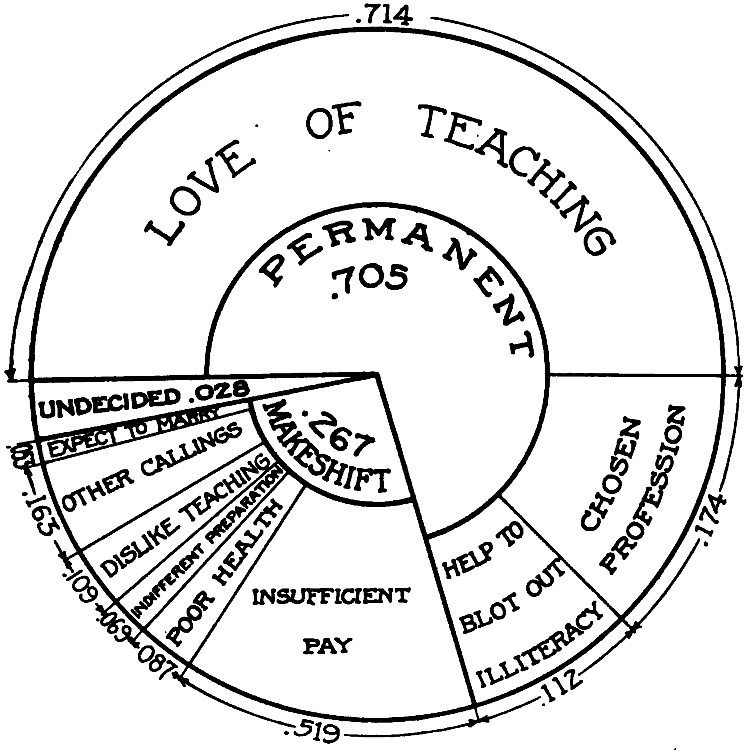
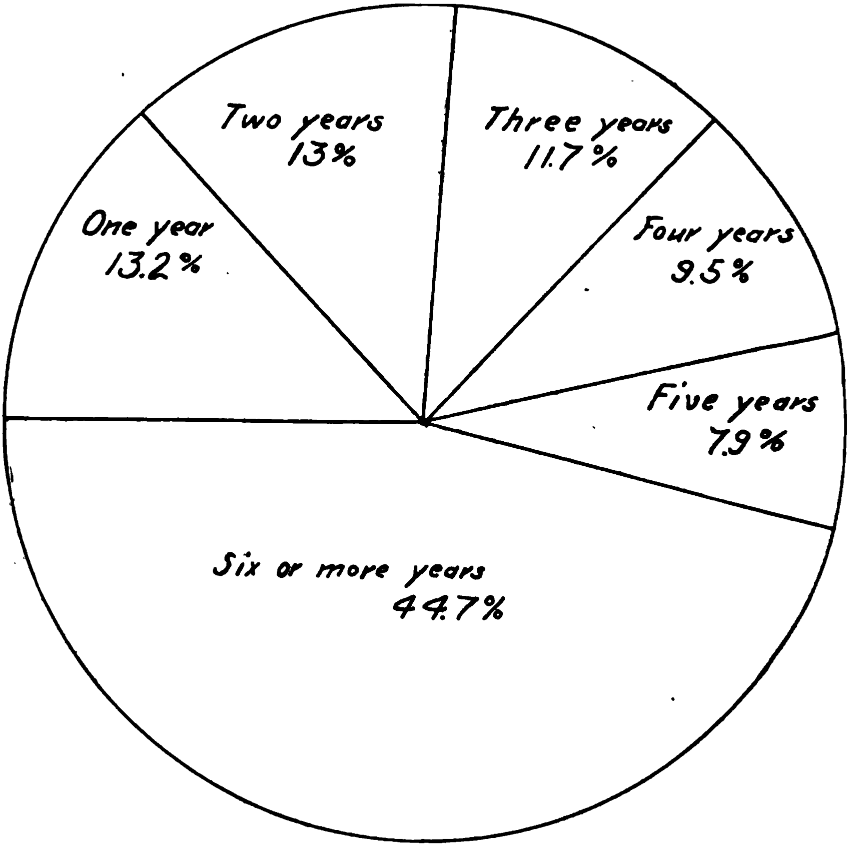


FIG. 31.

Figure 31 is a graphic illustration of the truth of this statement. It is based on answers from 3,648 rural and village teachers. Of these teachers 26.7 per cent declare frankly that they do not intend to make teaching their life work. And why? Of this number 51.9 per cent pronounce the pay wholly inadequate, so much so that they can not make ends meet; 8.7 per cent have impaired their health in the insanitary schools in which they have been obliged to work; 6.9 per cent find themselves poorly prepared for teaching and wisely enough have concluded to quit; while 10.9 per cent declare a dislike for teaching—quite likely fostered by the unwholesome surroundings, poor buildings, lack of equipment, etc., in the midst of which they have been obliged to struggle along from day to day. Sixteen and three-tenths per cent are attracted to more lucrative employment and, finally, 5.3 per cent expect to marry soon.



TEACHERS' EXPERIENCE IN YEARS

FIG. 82.—White teachers.

Two and eight-tenths per cent of the teachers are undecided and may or may not continue to teach—depending somewhat on circumstances. On the other hand, 70.5 per cent of the whole number assert that they intend to remain permanently in teaching. This is really a larger number of so-called permanent teachers than is usually found in the average State. Thus, a survey recently made by the

Bureau of Education of South Dakota discloses the fact that only 42.7 per cent of the teachers interviewed class themselves as permanent. This, at first glance, shows a more serious condition than in Alabama. However, the Alabama study includes both white and colored teachers. It is striking to know that while only 57 per cent of the white teachers declare their desire to pursue teaching permanently, nearly 90 per cent of the colored teachers express their eagerness to make teaching their life work. This brings Alabama's average for permanent teachers to 70.5 per cent. The explanation of the large per cent of the permanent teachers among the colored is evidently in the limited professional field open to colored persons of culture and learning.

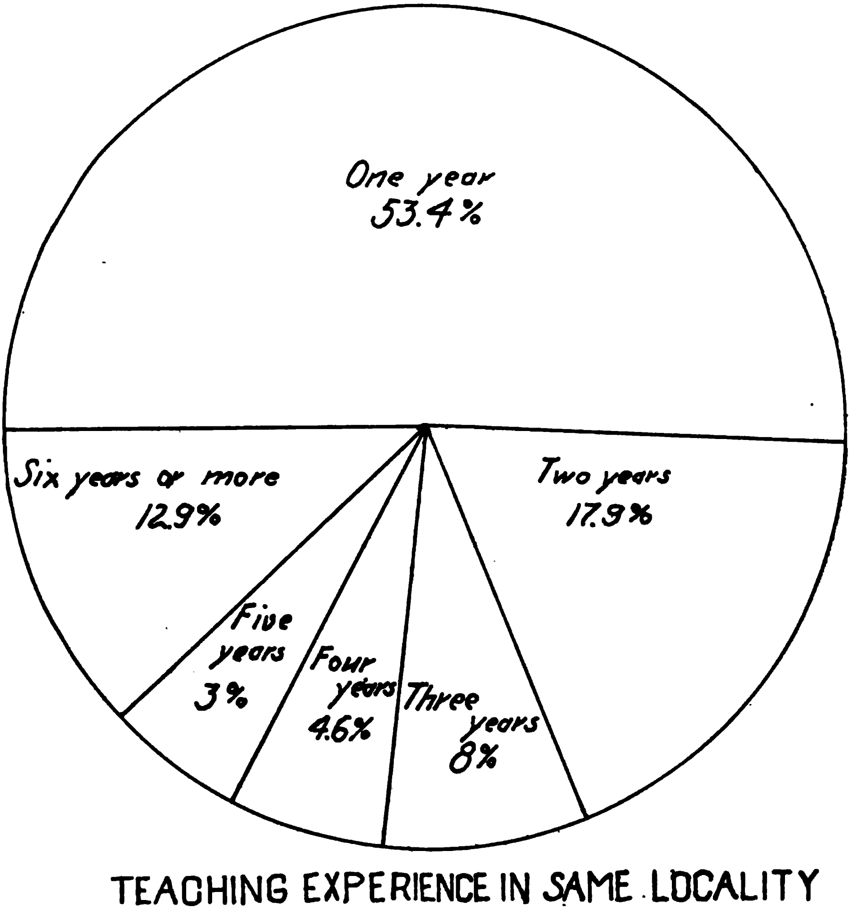


FIG. 38.—White teachers.

Seventy-one and four-tenths per cent of the teachers wish to follow the calling for love of the work; 17.4 per cent have nothing better to do, and 11.2 per cent appear to have the missionary motive and desire to help their fellow men. Especially do they seem eager to help rid Alabama of illiteracy.

Many additional reasons are given for dissatisfaction, many of them leading the teachers ultimately to give up teaching. Eleven hundred teachers complain of their living conditions; lack of modern conveniences, insanitary, unheated rooms, lack of privacy, poor cooking, loneliness, and want of wholesome social attractions. These and other reasons enumerated are sufficient to explain why teachers do not look forward to long permanent tenures in the schools of Alabama.

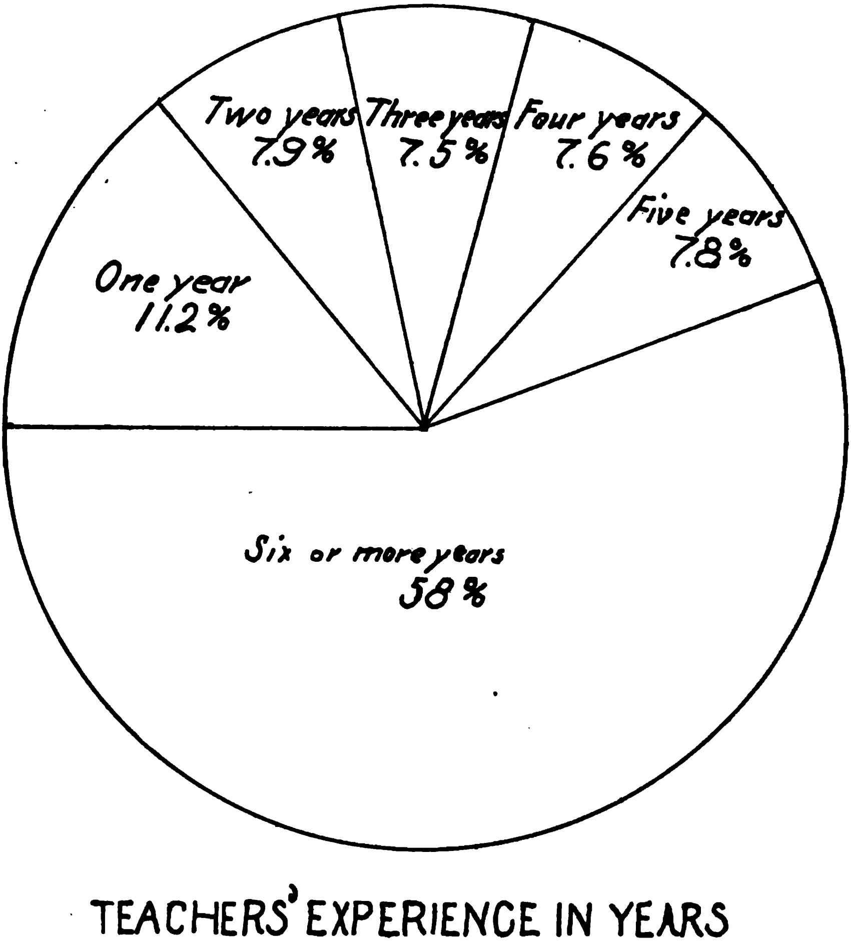
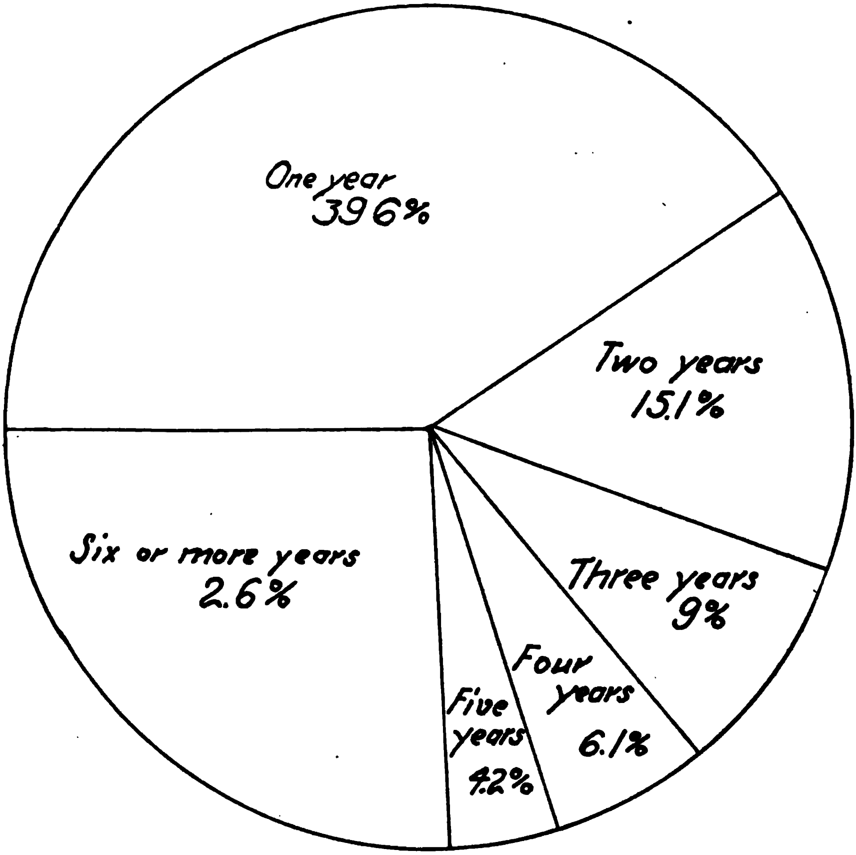


FIG. 34.—Colored teachers.

Length of tenure.—How long are the teaching "lives" of the Alabama teachers and how long do they remain in the same school community? Of 3,648 rural and village teachers reporting, 17.6 per cent were in their first year, 19.9 per cent in their second year—which also marks the high point numerically—and 17.4 per cent were in their third year. From here onward the decline in years was rapid. Thirteen and four-tenths per cent were in the fourth year, 9 per cent in the fifth, 6.5 per cent in the sixth, 5.5 per cent in the seventh, 4 per cent in the eighth, and 6.8 per cent, all told, above eight years.



TEACHING EXPERIENCE IN SAME LOCALITY

FIG. 35.—Colored teachers.

More complete figures are gleaned from the enrollment cards of the State institute for the current year. They place the average teaching experience at nearly six years, and the average teaching experience in the same community at two years. These figures include city teachers who are much better stabilized than the rural and village teachers and consequently help to raise the averages both in total tenure and length of tenure in the same place.

Academic and professional preparation.—This paragraph limits the discussion to rural and village teachers. The preparation of city teachers is given in detail in Chapter XII. Some pages of that chapter might well be studied in conjunction with the present paragraph to convey to the reader the difference in qualifications required of city teachers and rural and village teachers. Yet why should the State require less preparation of the teachers who instruct in the open country and in the rural villages where the educational problems are both more numerous and more difficult than in the cities? The answer is this: The State is certain to continue to be satisfied with lower qualifications in these places until the people realize the importance of rural and village schools to the life of the State, and are willing to pay for this service what it is worth—then, and not before, will it

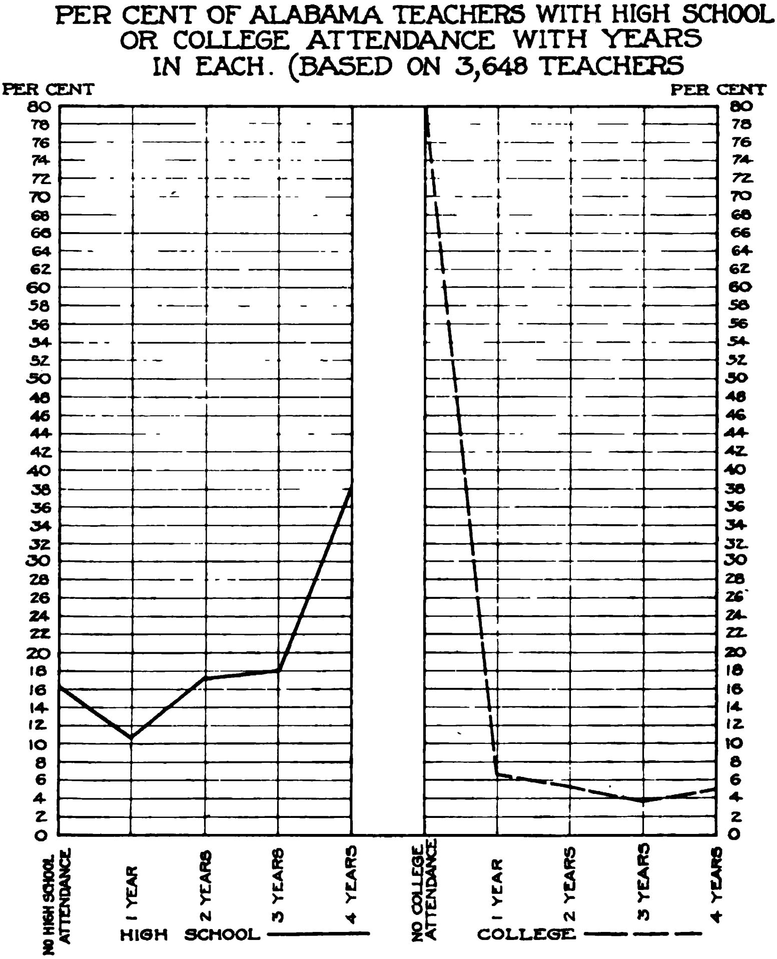

PER CENT OF ALABAMA TEACHERS WITH HIGH SCHOOL OR COLLEGE ATTENDANCE WITH YEARS IN EACH. (BASED ON 3,648 TEACHERS

FIG. 36.

be possible to procure strong teachers; then will the time be at hand for educational requirements to be increased largely.

In the group of 3,648 rural and village teachers reporting to the committee fully 16 per cent have completed only the elementary school course, and have slipped into the profession by the examination route. Ten and one-sixth per cent of the teachers have spent one year in high school, 17.2 per cent have spent two years in high school, 18 per cent three years, and 38 per cent four years. This includes both white and colored teachers. Twenty per cent of the teachers have had college or university attendance ranging from one to four years—4.7 per cent completing four-year courses and graduating. Many teachers reporting have passed from the elementary school direct to the normal schools or other teacher-training institutions. However, 63.6 per cent of the whole number report no professional preparation whatever. If due allowance were made for the large number of purely academic students in the normal schools and other schools designated in the questionnaires, it is quite certain to appear that less than 20 per cent of the whole number have really pursued professional studies, and only about 8 per cent have actually graduated from teacher-training institutions. This is a much smaller number than is credited with professional attendance and graduation in the annual report of the State department of education. But the report includes the whole number of city teachers. This raises the average percentage considerably. It can not be far from correct, therefore, to assert that not more than 10 per cent of the teachers now teaching in Alabama are professionally prepared teachers.

Teachers' salaries.—It would need no mathematician to figure out why so few teachers in Alabama spend their time and money on professional preparation. The salaries paid are so low as to offer neither incentive to professional preparation nor encouragement to long tnure. Alabama ranks in the next to lowest tier of States with an average salary of $344 per year. The State superintendent's report for 1918 shows very slight increases in salary, if any, during the last biennium. It gives the average annual salary of white male teachers at $437 as compared with $431 for the preceding year. The average salary of white women teachers was $367 as compared with $363 in 1916–17. In the case of teachers in rural white schools the average salary for men was $377 and for women $321 as compared with $367 and $304, respectively, for the preceding year. In urban schools there was a decrease from $1,348 to $1,347 and from $595 to $575, respectively, for men and women. Colored teachers were paid much less.

Figure 38 gives the salaries of 3,885 rural and village teachers. Of these teachers 20.9 per cent receive the paltry sum of $100 to $250

> ing the standard of the profession and exalting the office of the teacher. As the doctor of medicine or the practitioner at law is only admitted within the pale of his calling upon the production of his parchment or certificates, so the applicant for the position of instructor in our primary and other schools should be required by law to first produce his diploma, his authority to teach, from the normal schools.
>
> We call no uneducated quack or charlatan to perform surgery upon the bodies of our children lest they may be deformed, crippled, and maimed physically all their lives. Let us take equal care that we intrust the development of the mental faculties to skilled instructors of magnanimous character that the mentalities of our children may not be mutilated, deformed, and crippled to halt and limp through all the centuries of their never-ending lives. The deformed body will die and be forever put out of sight under the ground, but a mind made monstrous by bad teaching dies not, but stalks forever among the ages, an immortal mockery of the divine image.

The ultimate aim in every State should be—

1. To limit candidates for teaching credentials to graduation from standard teacher-training institutions or the full equivalent thereof.
2. To vest the power of certification exclusively in the State department of education.
3. To issue differentiated certificates for elementary, secondary, and special subject teachers.
4. To adjust all basal salaries to the kind of certificate held by the teacher.

The Alabama system of certification.—The system of certification used in this State is fundamentally sound. All regular certificates are issued by the State department of education through its State board of examiners which is composed of the State superintendent as ex officio president and two appointive members. Under the law the State board of examiners is authorized (1) to issue certificates on graduation to accredited schools and on direct examination; (2) to extend the life of certificates already issued; and (3) to validate credentials and certificates from other States.

The board of examiners issues certificates on the basis of graduation without examination to the four class A normal schools, the Alabama Girls' Technical Institute, schools of other States with similar standards, and also to graduates of standard institutions of Alabama and other States who have completed at least 14 semester hours of professional study prescribed by the board of examiners. The following higher institutions of learning in Alabama are rated as standard institutions (i. e., four years of college work above four years' high school with adequate instruction in professional subjects). and are granted certificates without examination: University of Alabama, Alabama Polytechnic Institute, Alabama Girls' Technical Institute, Howard College, Birmingham-Southern College, Women's College, Judson College, Athens College, and the four class A normal schools at Florence, Jacksonville, Troy, and Livingston. Talladega

College, a higher institution for colored students, has also recently been accredited for certification without examination. This is the only Negro institution in Alabama on the accredited list.

The State grants four regular certficates. They are:

1. *Life certificate.*—Granted to teachers of high degree of proficiency and professional attainments on the basis of five-year teaching experience.
2. *First grade.*—Granted on examination and on graduation; valid for six years; examination in all subjects required for second-grade certificate and in addition thereto, algebra, geometry, physics, elementary psychology, the school laws of Alabama, and advanced English.
3. *Second grade.*—Granted on examination; valid for four years. Examination in all subjects required for third-grade certificate and in addition thereto advanced requirements in arithmetic, history of Alabama, English grammar and literature, intermediate geography, United States history and civics, and class management.
4. *Third grade.*—Granted on examinaiton; valid for two years; examination in arithmetic, reading, penmanship, grammar, practical arithmetic, United States history, geography, elementary principles of physiology and hygiene and agriculture, and theory and practice of teaching.

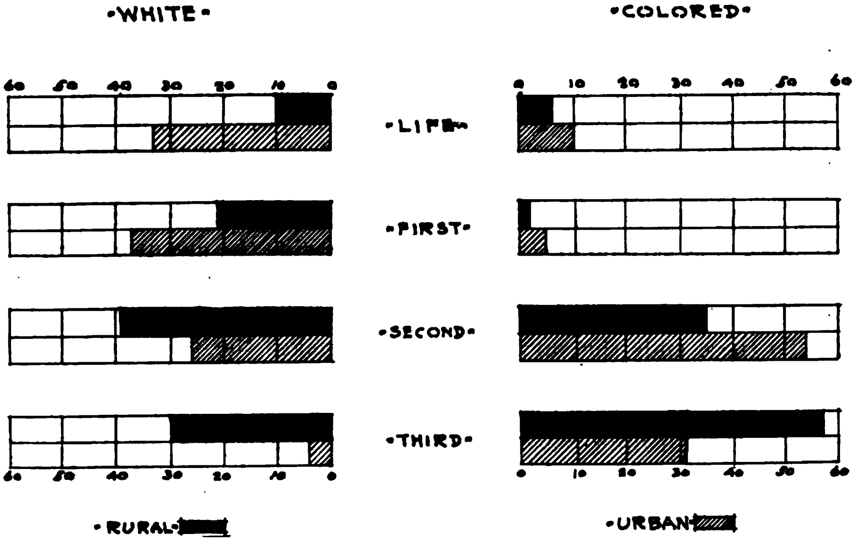


FIG. 41.—Teachers' certificates on a percentage basis.

Under the present law every grade of certificate (except life) may be extended for one year at a time for a total of not more than four consecutive years, provided the holder of such certificate has pursued professional study approved by the board for as much as six weeks in some standard educational institution within the 12 months immediately preceding the expiration of the applicant's certificate.

The total number of applicants for certificates in 1917–18 was 10,160. Of these 4,352 applicants failed to pass their examination.

The 5,798 who received certificates were grouped as follows: Life certificate, 90; first grade, 803; second grade, 1,679; third grade, 3,226.

Only 431 teachers were certificated upon graduation from teacher-training institutions. This is a startling commentary on the present inadequacy of the teacher-training institutions of the State, or more correctly speaking, on the regrettable failure of the would-be teacher to utilize these schools as a means of entrance to the profession. Alabama needs about 2,300 new teachers annually. If only 430 come from the professional schools, 1,870 must be recruited from the elementary and secondary schools, immature and inexperienced and with no professional preparation whatever. Here lies the most serious weakness in the whole school system.

Specific recommendations.—Alabama has a long way to go before its teachers are professionalized. The chief responsibility rests on the people and the legislature of the State and not on the teachers. Let the public become fully aware of its responsibility in the matter and the teachers will quickly enough respond. Let the public make the school plants and housing facilities more wholesome and inviting; offer the teachers better inducements by way of long, secure tenures, and satisfactory salaries; and provide the means of preparation. Capable young men and women will then be ready to invest their time and money in preparation for teaching.

To these ends the survey committee makes the following specific recommendations:

1. Improve teaching conditions by—

(*a*) Establishing reasonable minimum salaries for all teachers.

(*b*) Scaling all teachers' salaries to the grade of certificate held, thus placing a premium on special preparation.

2. Require higher teaching qualifications by—

(*a*) Increasing, gradually, the entrance requirements of the State normal schools and lengthening their study courses.

(*b*) Discontinuing the issue of certificates on examination as soon as the normal schools, the Alabama Girls' Technical Institute, the school of education in the University of Alabama, and department of education of the Alabama Polytechnic Institute, and other teacher-training institutions have become fully equipped to supply all the professional teachers required.

(*c*) Placing the minimum requirement for permission to teach at graduation from an accredited four-year high school, or its equivalent, and, in addition, at least one year's professional study acquired at a professional school for teachers. The standard to go into effect not before September, 1923.

3. Increase the supply of professional teachers by—

(*a*) Organizing teacher-training departments in the county high schools and other accredited high schools which meet the requirements of the State department of education; the schools to receive State aid.

(*b*) Establishing well-equipped departments for rural teachers at all the normal schools.

(*c*) Enlarging the facilities of the Alabama Polytechnic Institute to prepare teachers of general agriculture and teachers of vocational agriculture and home economics.

(*d*) Granting State bonuses to teachers as rewards for long service in a single school community.

(*e*) Establishing a retirement fund for teachers.

Chapter XIX.

PREPARATION OF PUBLIC-SCHOOL TEACHERS IN THE STATE NORMAL SCHOOLS.

General conditions.—The problems of teacher training in Alabama do not differ greatly from the problems in many other States. As in other Southern States it is complicated somewhat by the dual system of schools required for the white and colored races. As was shown in the preceding chapter, approximately 10 per cent of the white teachers are normal graduates or the equivalent, and an additional 10 per cent had some professional training. Eighty per cent of the white teachers of the State and over 95 per cent of the colored teachers have had no special training for their work. This grave situation needs careful examination with a view to providing remedies.

Among the reasons for this unfortunate situation two may be restated here:

1. The certification law and system which at present exist permit wholly unprepared persons to enter the teaching ranks.

2. Although a number of improvements have been made in the State normal schools in recent years, the provisions for the training of teachers are still wholly inadequate.

At present there are two routes in Alabama to the teacher's desk:

1. A prospective teacher may complete the ninth grade of the public school system and then take a four-year course at a State normal school or other standard teacher-training school or complete the eleventh grade and take a two-year professional course. This plan leads to a first-grade certificate.

2. The prospective teacher may avoid the long and expensive course of preparation and by a little cramming pass examinations in a few subjects and secure a teacher's certificate. Why should an ambitious young person finish a high-school course and then spend two years in a State normal school when with a very small amount of high-school preparation and a little special review she can reach her goal by taking an examination? If the normal graduate gets a slightly larger salary it is because she has demonstrated that she is a better teacher. She is given no initial advantage in the way of a higher remuneration.

It is not contended that all the teachers who have had no special professional training are poor teachers. This would be far from the truth. Neither is it contended that professional training will make a good teacher out of every person. It can not be gainsaid, however, that the skill acquired by practicing untried methods on little children and experimenting on them is acquired by a slow method and a criminally wasteful one. If each blacksmith had to learn the arts of his craft by unguided practice, long, indeed, would be his apprenticeship, and much of the skill of one generation would not be passed on to the next.

Those who criticize the normal schools of Alabama as not fulfilling their functions because they turn out only about one-tenth of the new teachers needed each year forget the fact that these schools are doing a wonderful work in supplying such a large percentage of teachers as they do, considering the fact that there are gaping doors to the teacher's desk on this side of the normal school. The teacher-training situation in Alabama is in much the same position as that of medical training a generation or two ago. At that time almost no professional training was required as a prerequisite to the practice of medicine. The medical schools had meager equipment, short courses, and few students. Would it have been fair under such circumstances to criticize the medical schools for not furnishing a sufficient supply of trained physicians? Would it be reasonable to hope that by improving the medical schools, raising standards for admission, and lengthening their courses there would be a very material increase in the supply of professionally-trained physicians? Was not the plan followed the most sensible one, namely, a requirement of professional training as a prerequisite to a license to practice medicine? If the people of Alabama are to have trained teachers for their children, they must require professional training of all applicants for teachers' certificates.

The methods to be employed in making such a requirement and yet not working an injustice to the many excellent teachers now in service, and also to avoid a teacher shortage, have already been pointed out in this report. Briefly, the recommendation is that after July 1, 1921, no new teachers' certificates shall be issued without satisfactory evidence of academic and professional training on the part of the applicants, the amount to be increased gradually year by year. Closely related to this is the recommendation that increased remuneration shall be given the professionally-trained teacher. The success with which similar plans have been worked out in other States warrants the committee in urging this as one of the most important considerations devolving upon the present legislature.

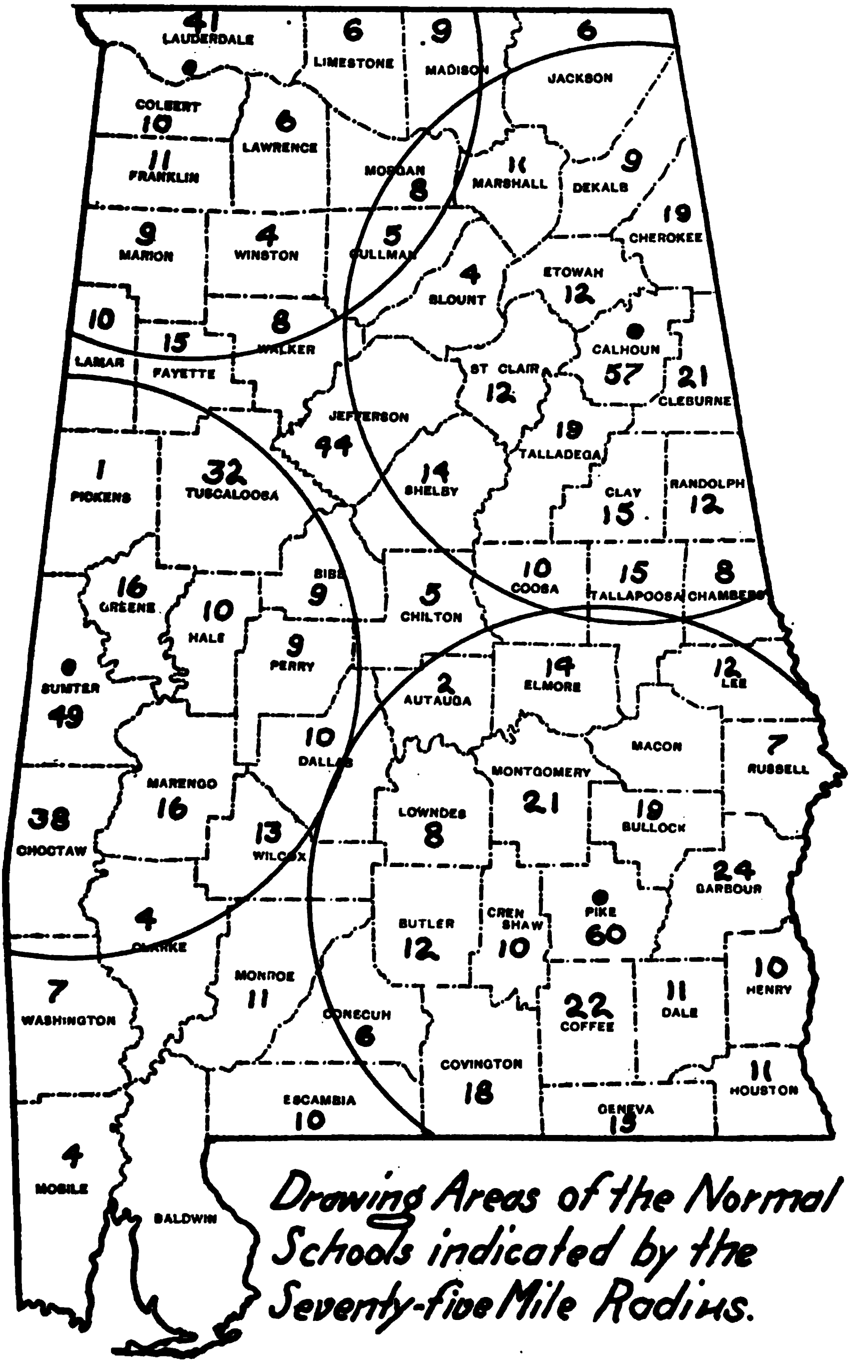
In addition to the four normal schools of class A and the accredited colleges enumerated in chapter 18, the following nonaccredited schools are engaged in teacher-training work: The two class B normal schools at Moundville and Daphne, Tuskeegee Institute (colored), the normal school at Montgomery (colored), and the Agricultural and Mechanical College at Normal (colored).

The logical division of work among the State teacher-training institutions of Alabama for the present and probably for some time to come is as follows: The State University should train teachers of academic subjects in high school, superintendents, principals and supervisors for city and county school systems, and teachers of vocational industries as at present arranged; the Alabama Polytechnic Institute and the Agricultural and Mechanical Arts College should train teachers of agriculture and of closely allied subjects; the normal schools should train teachers for the elementary schools; the Alabama Girls' Technical Institute should train elementary and secondary teachers and supervisors of home economics.

With minor exceptions this is the division of work as now carried on, and the management at each institution seems to recognize this natural and logical program. There are many anomalies in the situation, such as the State maintaining several normal schools and not accrediting them and legally certificating their graduates, the maintenance of summer schools for elementary teachers at the State University and Polytechnic Institute and admitting students to them who could not qualify for entrance, the partial duplication of teacher training in technical and vocational subjects at the two major institutions of collegiate rank, etc. Geographic, industrial, social, and historic conditions seem to justify most of these anomalies. If the program is carried out for creating the standard of professional training which the committee proposes some readjustments will gradually be made. Great demands will be made upon the normal schools and their functions will naturally expand, as will those of other teacher-training institutions.

I. NORMAL SCHOOLS OF CLASS A.

The State normal schools at Florence, Jacksonville, Livingston, and Troy have been very wisely classified as the major training schools of the State for preparing white teachers for the elementary schools. The plan of accrediting institutions for the training of teachers on basis of the equipment, faculty, course of study, and character of work done, is excellent. The State is to be congratulated upon the courageous actions of the board of trustees of the State normal schools in rigidly delimiting the scope and functions of these schools. The reports of the board show a clear conception of the teacher training problems of the State. The committee would remind the board that much courageous work is still to be done to raise these schools to the highest standard.



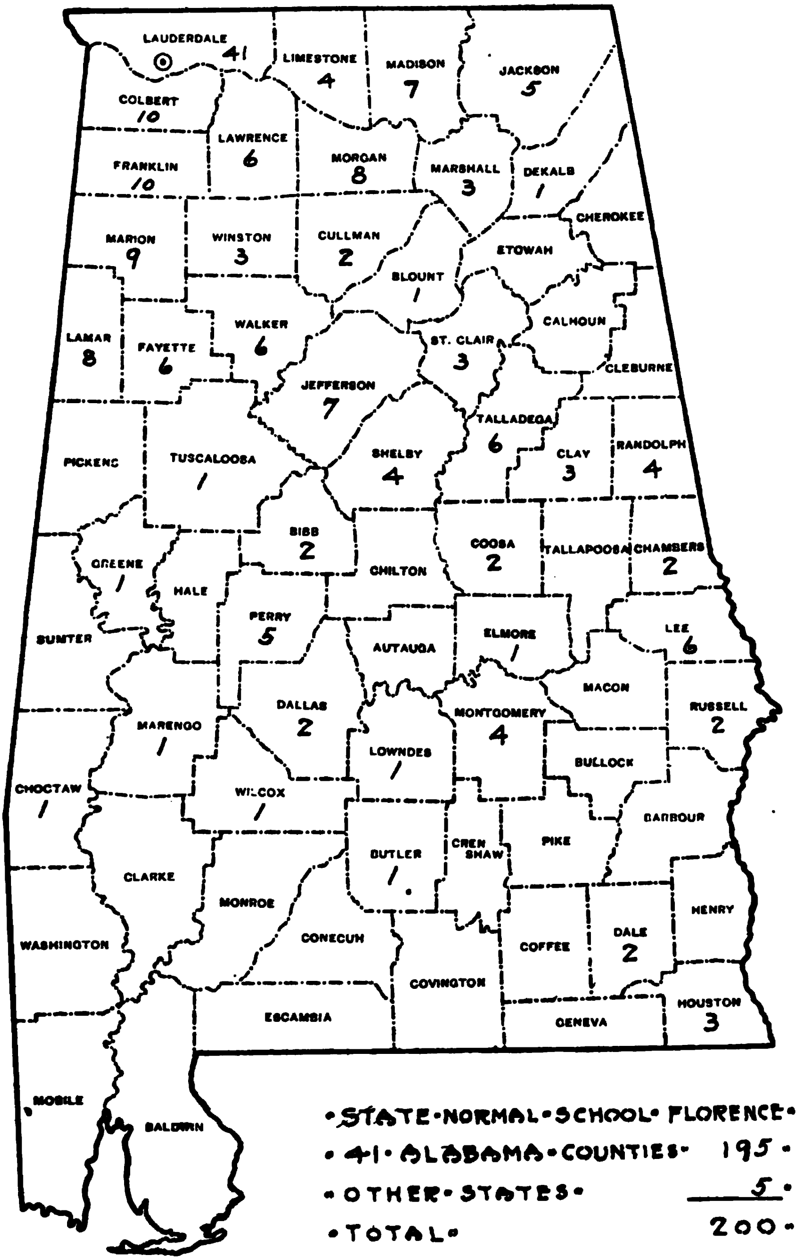
Drawing Areas of the Normal Schools indicated by the Seventy-five Mile Radius.

Location of schools and distribution of students.—While the schools are not located in the larger cities of the State and do not have as good railway facilities as might be desired, an inspection of the maps showing the distribution of their students during the current school year shows that each school has a good distribution within its own particular territory and that there is a very equitable representation from over the State as a whole. An examination of the maps shows that each school receives a majority of its students from within a radius not to exceed 75 miles. There is nothing unusual in this fact because a statement approximating this may be made for even the greatest educational institutions of this country. Oddly enough, the school at Florence, in spite of its location in an extreme corner of the State, has the widest distribution of students, the average mileage of these students probably being greater than even that of the students at the State university.

The map showing the total distribution of students at the four normal schools is worthy of careful study. It shows that there is a teacher-training influence permeating the entire State and that these institutions are splendidly serving the Commonwealth. It would indicate, too, that the question which has often been raised of abolishing these schools and establishing a single teacher-training institution is not well taken. If these normal schools are given adequate support they will render a State-wide service which could not be given by a single institution. A proposition has been made to remove the State normal school now located at Livingston to Selma. The arguments in favor of this, and there are many, would not affect the general proposition that the State of Alabama needs four well-maintained normal schools.

Control.—These normal schools are wisely placed under a single board of control. This insures their treatment as State institutions rather than as local schools. Elsewhere in this report will be found recommendations as to some changes in the plan for the control of these and other State educational institutions. While there seems to be no evidence of any unfortunate effects resulting from the occasional appointment which has been made of resident members of the board, the committee believes it to be especially important that each school be legally safeguarded against the appointment of local or resident members of the board.

Buildings and equipment.—Each of the four State normal schools has a good dormitory for women, with reasonably adequate equipments for boarding departments. These dormitories have been recently built, and while not of modern fireproof construction they are all in a good state of repair and in nearly all cases are kept neat and clean. Each school has another fair-sized brick building used for general purposes, including training school. These buildings are all


LAUDERDALE 41
LIMESTONE 4
MADISON 7
JACKSON 5
COLBERT 10
LAWRENCE 6
MORGAN 8
MARSHALL 3
DEKALB 1
FRANKLIN 10
CHEROKEE
MARION 9
WINSTON 3
CULLMAN 2
ETOWAH
BLOUNT 1
LAMAR 8
FAYETTE 6
WALKER 6
CALHOUN
ST. CLAIR 3
CLEBURNE
JEFFERSON 7
TALLADEGA 6
PICKENS
TUSCALOOSA 1
SHELBY 4
CLAY 3
RANDOLPH 4
BIBB 2
COOSA 2
TALLAPOOSA
CHAMBERS 2
GREENE 1
HALE
CHILTON
PERRY 5
SUMTER
AUTAUGA
ELMORE 1
LEE 6
MACON
DALLAS 2
RUSSELL 2
MARENGO 1
MONTGOMERY 4
LOWNDES 1
BULLOCK
CHOCTAW 1
WILCOX 1
BARBOUR
BUTLER 1
CRENSHAW
PIKE
CLARKE
MONROE
HENRY
CONECUH
DALE 2
WASHINGTON
COFFEE
COVINGTON
ESCAMBIA
HOUSTON 3
GENEVA
MOBILE
BALDWIN
•STATE•NORMAL•SCHOOL• FLORENCE•
• 41• ALABAMA•COUNTIES• 195 •
• OTHER• STATES• 5 •
•TOTAL• 200 •

MAP 11.

in a very dilapidated condition, due in large part to the fact that the funds of the schools have not been sufficient for upkeep and repairs. In some cases the rooms present a very unkempt and untidy condition, which betokens an unpardonable weakness of administration.

The equipment in each of the schools is wofully inadequate. Nearly all the meager equipment at each of the schools was provided without any financial aid from the State, hence the greater obligation of the State to make more adequate provisions for these needs. The laboratories and libraries in some cases are hardly adequate for the needs of the smallest accredited high school in the State. The State should immediately establish funds for the upkeep and repair of buildings and for apparatus and libraries.

Grounds.—In all of the normal schools, excepting the one at Jacksonville, there is pressing need for additional land. These needs will be severally discussed in connection with each institution. It is imperative that steps be taken at once to secure the land needed before the inevitable advance in prices which is imminent. At least options should be secured looking to the future.

Inventory and costs.—Considering the relatively small amounts of money which the State has invested in the normal schools the returns in service have been very large indeed. In considering the returns which the State receives from its investment in teacher training it should not be forgotten that no institution renders a more valuable indirect return in home training. The great majority of normal students and graduates are young women whose normal lot after teaching a few years is to marry and rear families. No better preparation for the duties of the mother and home maker is given in any institution than in the normal school, where young women study child nature and receive training in the nurture, the instruction, and the development of the child. This indirect return to the State can not well be shown in graphs or statistics but it is invaluable.

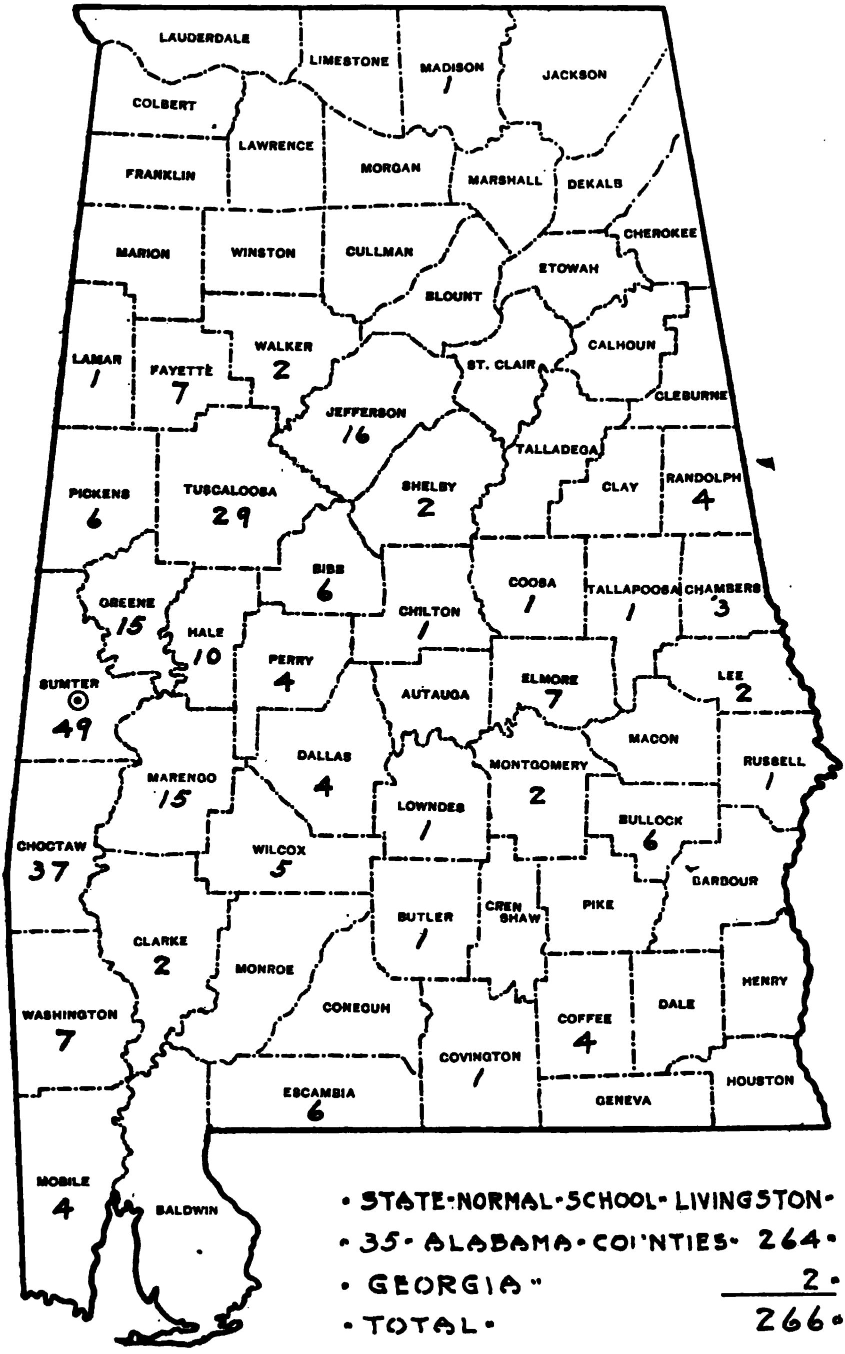
Inventory and budget.—Table 57 shows a summary of the inventory of capital outlay of each school and a summary of its budget for the fiscal year from July 1, 1917, to June 30, 1918.

(1) Inventory: This is designed to consist of an estimate of the fair cash value of the property of the school.

(2) Income: By this is meant all revenues, excepting from dormitories or boarding departments, which are to be considered as self-sustaining rather than revenue producing.

(3) Expenditures:

(*a*) Capital outlay. The expenditures in capital outlay should include all that are intended to enlarge the material equipment of the school or add to its efficiency in a relatively permanent way.



• STATE·NORMAL·SCHOOL· LIVINGSTON•

•35•ALABAMA•COUNTIES•	264•
• GEORGIA "	2•
•TOTAL•	266•

MAP 12.

(1) Land and land improvements.
(2) Buildings and betterments.
(3) All kinds of new permanent equipment, such as machinery, fixtures, furniture, apparatus, tools, additions to the library and museum, but not ordinary repairs or replacements.

(*b*) The expenditures for maintenance should include all outlay intended to keep the plant up to 100 per cent of its former efficiency. Here belong all expenditures for repairs, replacements or equipment of every sort, insurance, and the service of watchman or others who would be employed even if the plant were not in use.

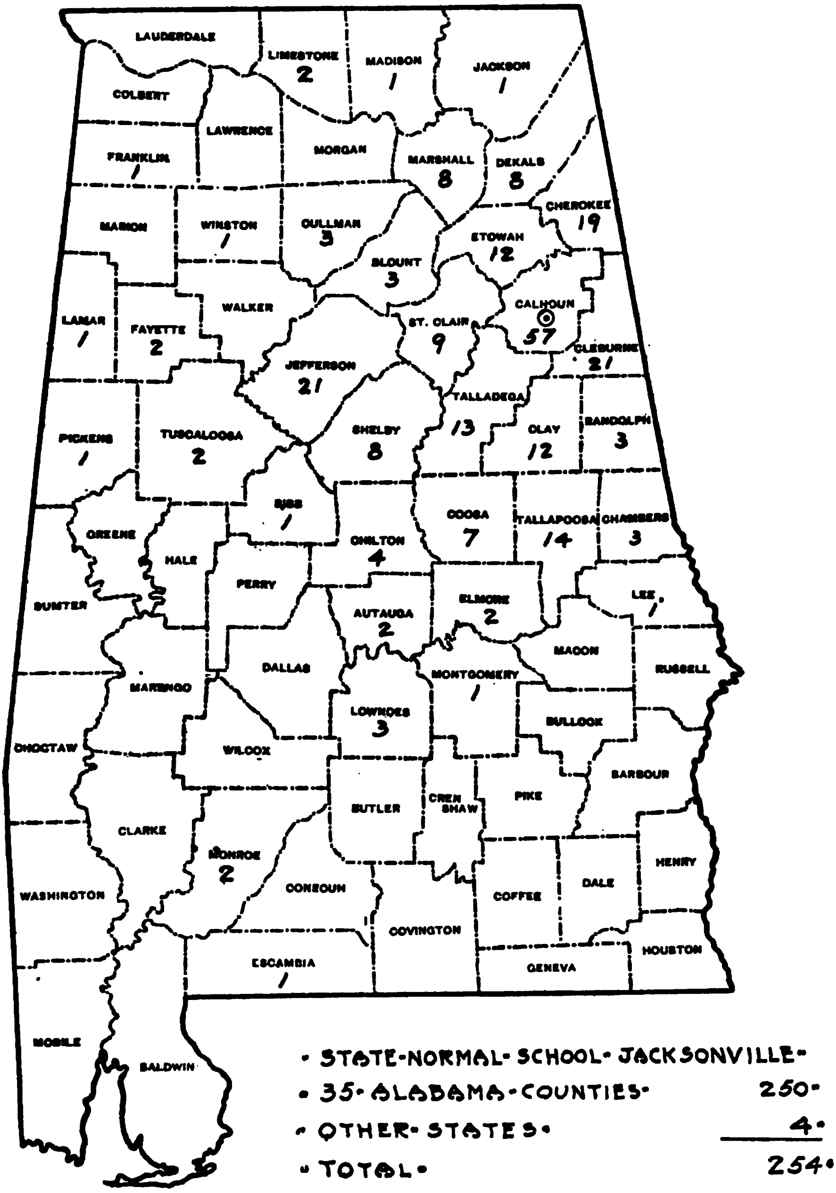
If the risk is carried by the State instead of by an insurance company, the cost of such insurance, according to current rates, should be charged to the maintenance account. Corresponding credit should be given receipts even though no actual outlay is made to the school.

(*c*) Operation. The cost of operation may be classified under the following heads:

(1) Administration:
    Salaries of officers and clerks.
    Printing, stationery, office supplies.
    Postage, telephone, and telegraph.
    Express, freight, and drayage.
    Traveling expenses.
(2) Physical plant:
    Salaries of engineers, janitors, and yardmen.
    Fuel, oil, light and power, and water.
    Janitor's supplies.
(3) Instruction:
    Teachers' salaries.
    Textbooks.
    Light and power for instruction.
    Educational supplies.
    Librarians' salaries.
    Newspapers and magazines.
    Library supplies.
(4) Student welfare:
    Student health.
    Lectures, concerts.
    Athletics.
    Student organizations.

Students in the normal schools.—Data were obtained at regular chapel assemblies at the four class A normal schools from the students themselves. These are published in Table 58. In no case does this represent all of the students enrolled. In all of the schools, except Troy, some students were engaged in practice teaching at the time of the chapel assembly and in the case of Jacksonville attendance was optional. The data, however, may be considered fairly representative.

It will be noted that the farming population furnishes 68 per cent of the normal students. Nevertheless, only 27 per cent of the total expect to teach in rural schools as they now are conducted. It is very clearly not the fault of the normal school that so few of its students desire to teach in rural schools, as is shown by the fact that 58 per cent say they would make rural teaching their life work if living and teaching conditions in rural schools were satisfactory.


LAUDERDALE
LIMESTONE 2
MADISON 1
JACKSON 1
COLBERT
LAWRENCE
MORGAN
MARSHALL 8
DEKALB 8
FRANKLIN 1
MARION
WINSTON 1
CULLMAN 3
CHEROKEE 19
ETOWAH 12
BLOUNT 3
LAMAR 1
FAYETTE 2
WALKER
ST. CLAIR 9
CALHOUN 57
CLEBURNE 21
JEFFERSON 21
TALLADEGA 13
PICKENS 1
TUSCALOOSA 2
SHELBY 8
CLAY 12
RANDOLPH 3
BIBB 1
COOSA 7
TALLAPOOSA 14
CHAMBERS 3
GREENE
HALE
CHILTON 4
PERRY
SUMTER
ELMORE 2
LEE 1
AUTAUGA 2
MACON
DALLAS
RUSSELL
MARENGO
MONTGOMERY 1
LOWNDES 3
BULLOCK
CHOCTAW
WILCOX
BARBOUR
BUTLER
CREN SHAW
PIKE
CLARKE
MONROE 2
HENRY
DALE
WASHINGTON
CONECUH
COFFEE
COVINGTON
HOUSTON
ESCAMBIA 1
GENEVA
MOBILE
BALDWIN
STATE-NORMAL-SCHOOL-JACKSONVILLE-
35-ALABAMA-COUNTIES- 250-
OTHER-STATES- 4-
TOTAL- 254-

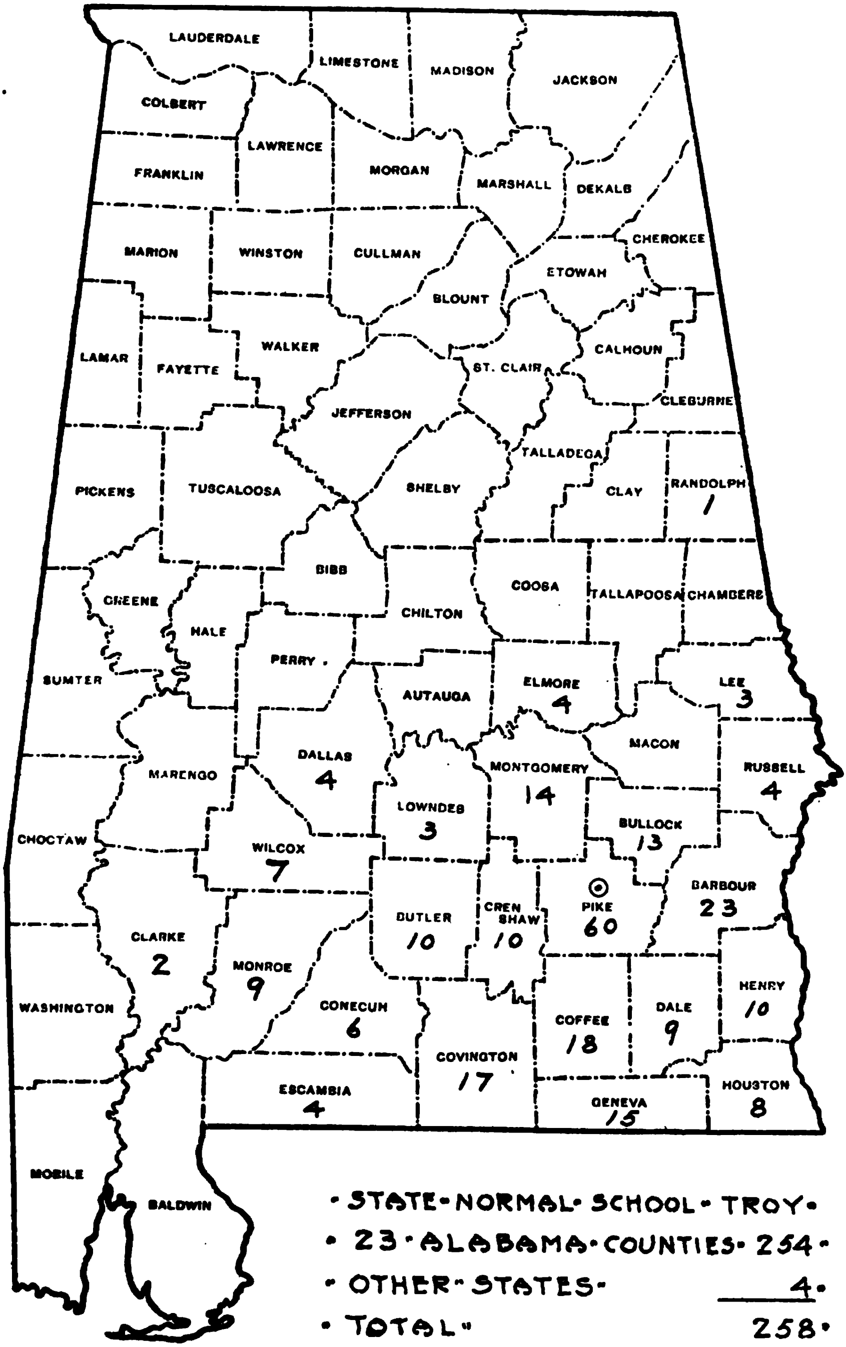
MAP 18.

TABLE 57.—*Inventory and budget summary.*

	Florence.	Jacksonville.	Livingston.	Troy.
1. Inventory of capital outlay:				
(a) Land and land improvements	$20,000.00	$15,000.00	$10,000.00	$19,000.00
(b) Buildings	160,000.00	125,000.00	105,000.00	100,000.00
(c) Machinery	950.00	2,000.00	2,000.00	400.00
(d) Fixtures	1,500.00	600.00	4,000.00	200.00
(e) Furniture and furnishings	24,000.00	10,000.00	7,000.00	2,500.00
(f) Apparatus	5,100.00	2,000.00	500.00	1,000.00
(g) Library	8,000.00	3,000.00	3,500.00	5,000.00
(h) Museum	1,500.00	....	....	....
Total	221,050.00	157,600.00	132,000.00	128,100.00
Indebtedness	87,859.00	12,000.00	800.00	0
2. Income for fiscal year July 1, 1917, to June 30, 1918:				
(a) Appropriation	20,000.00	20,000.00	20,000.00	20,000.00
(b) Fees	8,537.00	6,115.49	9,447.00	11,435.87
Total	28,537.00	26,115.49	29,447.00	31,435.87
3. Expenditures for fiscal year 1917-18:				
(a) Capital outlay—				
(1) Land and land improvements	0	200.00	0	....
(2) Buildings and building additions	0	1,000.00	367.00	....
(3) Added permanent equipment	700.00	200.00	836.00	....
(b) Maintenance	1,932.78	1,744.16	....	1,084.95
(c) Operation—				
(1) Administration	4,327.00	5,875.07	4,736.00	5,870.09
(2) Physical plant	2,050.49	1,808.91	2,826.00	1,989.50
(3) Instruction	18,527.27	20,102.20	19,995.00	19,808.08
(4) Student welfare	859.48	57.80	....	187.88
(5) "Other objects"	....	....	....	1,332.56
	28,396.97	30,988.14	28,759.00	30,269.98

The 94.5 per cent of students who intend to teach is very gratifying, indeed. It amply demonstrates the fact that these schools are thoroughly devoted to the main purpose of their existence, namely, the training of teachers. Everything considered, the showing as to high-school preparation is also gratifying. The model preparation is shown to be four years of high-school work, the median preparation being 3.15 years. Many a normal school in States having better established high schools will not make a better showing. The relative maturity may be closely related to the general over-age condition found throughout the schools of the State, in spite of the fact that the elementary school is supposed to be completed in seven years.

Normal school faculties.—Data concerning the faculties of these schools show a relatively low standard of academic and professional training but a relatively long experience in teaching. Less than half the members of the faculties have completed college or university courses leading to academic or professional degrees. The foregoing statement applies to the faculties taken not only collectively, but also severally except for one school, but in this case the median attendance of faculty members beyond the seventh grade is but seven years, and several members possess degrees obtained from only four to six years of attendance beyond the seventh grade. In several of the schools a considerable number of the faculties have followed the


LAUDERDALE
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WINSTON
CULLMAN
CHEROKEE
ETOWAH
BLOUNT
LAMAR
FAYETTE
WALKER
CALHOUN
ST. CLAIR
JEFFERSON
CLEBURNE
TALLADEGA
PICKENS
TUSCALOOSA
SHELBY
CLAY
RANDOLPH 1
BIBB
COOSA
TALLAPOOSA
CHAMBERS
GREENE
HALE
CHILTON
PERRY
SUMTER
AUTAUGA
ELMORE 4
LEE 3
MACON
DALLAS 4
MARENGO
MONTGOMERY 14
RUSSELL 4
LOWNDES 3
CHOCTAW
BULLOCK 13
WILCOX 7
BARBOUR 23
BUTLER 10
CRENSHAW 10
PIKE 60
CLARKE 2
MONROE 9
HENRY 10
WASHINGTON
CONECUH 6
COFFEE 18
DALE 9
COVINGTON 17
HOUSTON 8
ESCAMBIA 4
GENEVA 15
MOBILE
BALDWIN
• STATE • NORMAL • SCHOOL • TROY •
• 23 • ALABAMA • COUNTIES • 254 •
• OTHER • STATES • 4 •
• TOTAL • 258 •

MAP 14.

commendable practice of attending some of the best summer schools in the country. While this does not make a strong showing in point of time, it reveals a marked interest in professional advancement.

TABLE 58.—*Data pertaining to students in normal schools.*

	Florence.	Jacksonville.	Livingston.	Troy.	Total.
Birthplace:					
The farm	79	68	126	146	419
In town (less than 2,000)	32	15	53	49	149
In city	22	7	11	5	45
Guardian's occupation:					
Farmer	69	54	126	141	390
Business	37	1	30	55	122
Professional	12	37	15	15	79
Artisan	12	....	8	4	24
Do you intend to teach?					
Yes	130	80	175	199	584
No	2	9	15	10	34
Intend to make teaching permanent occupation					
Yes	107	63	147	115	432
No	25	18	35	31	109
Where do you expect to teach?					
In country	37	23	47	106	213
In town	78	45	113	72	308
In city	18	11	14	13	56
Kind of teaching preferred:					
Rural (all grades)	27	13	25	61	126
Elementary in town or city	40	24	69	64	197
Intermediate in town or city	31	25	35	36	127
High school	25	17	34	16	92
Supervisor	2	2	4	6	14
Vocational subjects	4	4	6	17	31
Desire to make rural teaching life work?					
Yes	25	15	40	76	156
No	102	63	144	136	306
Desire to make rural teaching lifework if living and teaching conditions satisfactory?					
Yes	80	49	117	145	391
No	38	28	62	60	188
Years beyond seventh grade when entering normal:					
None	9	6	9	4	28
1	30	18	32	31	111
2	21	19	57	53	150
3	15	10	47	49	121
4	50	29	32	60	171
5	7	3	4	8	22
6	1	4	4	2	11
Age at time of completing present course:					
Less than 15	....	....	....	....	....
15	1	....	1	....	2
16	1	1	....	1	3
17	5	2	6	8	21
18	17	10	36	33	96
19	18	20	42	50	130
20	30	22	52	57	161
21	3	5	13	23	44
22	8	8	16	14	46
23	4	4	4	8	20
24	5	3	4	3	15
25	11	9	4	2	26
26	1	1	3	2	7
27	1	....	1	2	4
28	2	1	1	2	6
29	3	1	1	....	5
30	1	1	1	....	3
Over 30	3	1	2	1	7

A brief survey of the personnel of several of the faculties gives the impression that provision should at once be made for emeritus positions for those who have had long and honorable careers in the service of the State and who are now being subjected to the strain of overloaded programs. As a specific case in point one teacher who has had 28 years' experience in public school teaching and 30 years' teaching in normal school is now carrying 16 teaching periods per week with a teaching load of 512 student clock hours. Surely no argument is necessary. A few thousand dollars per year would cover these needs and would be but a meager recognition of faithful services.

Teacher load.—An attempt was made to compute the teacher load in each of the faculties, but some difficulty was experienced in evaluating the time which departmental teachers devoted to supervising the teaching of their respective subjects in the training school. Even when giving this a very low estimate, it was found that the teacher load exceeds the standard generally accepted for normal schools.

Instructional costs.—An examination of the educational administration of any institution involves a study of the distribution of the work and of the funds apportioned to instruction. The distribution in the class A normal schools of Alabama is shown in terms of costs per 1,000 "student clock hours" and does not include training school costs.

By a student clock hour is meant a period of 50 minutes in the clear for one student. In a class of 30 students reciting 45 minutes there will be 27 student clock hours for each recitation $\frac{45}{50}$ of 30=27. A laboratory or shop hour is treated as representing two-thirds of a recitation hour.

In estimating the work of the teacher due allowance is made for distinctively administrative duties, but no allowance is made for many hours spent by faithful teachers in giving individual assistance to students, counseling with them regarding student organizations, and other school work not directly connected with classroom instruction.

TABLE 59.—*Instructional costs, per 1,000 student hours.*

Subject.	Florence.	Jacksonville.	Livingston.	Troy.
Mathematics	$77.00	$80.00	$86.00	$104.00
Arts	30.00	80.00	75.00	77.00
English	70.00	110.00	72.00	75.00
Science	78.00	113.00	69.00	121.00
History	50.00	85.00	55.00	81.00
Education	50.00	40.00	54.00	86.00

As the attendance and budgets at the four class A normal schools do not vary greatly and the courses of study are identical, a comparison of unit costs may fairly be made. It will be noted from Table 59 that considerable variation occurs. The facts that education is the most important department in a normal school and that the instructional cost in that department is one of the lowest in these lists suggest a careful study of the situation in each school. The explanation of the disparity of relative costs in the same school is found partly in the fact that elective academic subjects of college grade are not in great demand, the classes are small, and the unit costs are consequently high. It is partly found, however, in the fact that the classes in education are altogether too large, one school reporting the work of the head of that department as comprising the teaching of four classes having 108, 75, 70, and 70 students, respectively.

Space does not permit a discussion of methods of instruction, but it should be pointed out that modern pedagogy prescribes other forms of procedure than recitation lesson types. Although it is necessary for administrative purposes to continue much instructional work by means of formal recitations, the normal schools should lead not only in utilizing the various recitation types, but should also lead in the employment of organic, socialized processes. The latter forms of procedure require additions to equipment and teaching force in which the department of education may claim precedence over other departments in a normal school.

The relatively mature students who are studying the learning processes with a view of equipping themselves to direct these processes in the public schools should have every opportunity to study them under most favorable conditions. Since learning proceeds by trial and error, directed learning is necessarily a laboratory procedure, using the term laboratory in a broad sense. Any course in education, therefore, demands facilities for experimental studies, not necessarily expensive equipment, but rooms, materials, teachers, and helpers. To conduct a large class in a study of the technique of teaching by the textbook method is in the same pedagogical class with teaching chemistry or physics by the textbook method. It is far from being valueless but it is also far from being the best method.

From the fact that the unit costs for instruction in education are low it should not be inferred that the costs for academic subjects are too high. The latter costs are on a very low basis and it is to be hoped that the State will find means to enlarge and increase the efficiency of the departments of education without lowering the standards in any other departments, all of which seem to be at an irreducible minimum.

Occupation of the normal school graduates.—An important question is raised when we ask the occupation of the graduates of the normal schools. Data furnished for the classes of 1918 show that nearly all of these graduates at once engaged in teaching or entered into war or other Government services. This is certainly an excellent record.

TABLE 60.—*Occupation of graduates, classes of 1918.*

Occupation.	Florence.	Jacksonville.	Livingston.	Troy.	Total.
. Teaching:					
(*a*) Rural	50	13	34	43	140
(*b*) Village	16	20	16	7	59
(*c*) City	26	2	4	12	44
2. Attending school	2	....	1	....	3
3. Home work	....	....	....	....	....
4. Married	1	....	1	1	3
5. Enlisted in Army	3	5	4	6	18
6. Government service	3	3	2	....	8
7. Deceased	....	....	....	1	1
8. Unknown	....	5	....	....	5
Total	101	48	62	70	281

Their salaries.—An inspection of the salary lists shows that the members of the faculty are greatly underpaid. The recent advance in teachers' salaries has placed many high-school teachers in advance of the salaries of many of these trained and experienced teachers. When the great importance of their work is considered, and also the material advance in salary which would be required to replace many of them, it is readily seen that appreciable advances should be made at once. This applies with equal force to the salaries of the presidents of the schools.

The average salaries of faculty members, not including the presidents and a few student assistants and part-time teachers, are as follows for the regular school year of nine months: Florence, $1,252; Livingston, $1,021; Jacksonville, $1,173; Troy, $1,385.

Too much emphasis should not be replaced upon a simple average of salaries, but the variation in any one school, everything considered, is not excessive. However, if compared with averages for other normal schools surveyed by the Bureau of Education, they prove to be very low, as appears in the following figures, which were all taken before the recent increase in salaries:

Ellensburg (Wash.)	$1,700	Flagstaff (Ariz.)	$1,555
Cheney (Wash.)	1,695	Regina, Canada	1,915
Bellingham (Wash.)	1,713	Sasketoon, Canada	2,380
Tempe (Ariz.)	1,794		

Training school facilities.—The training school facilities at the four class A normal schools are quite similar and have similar merits and defects. The normal school at Florence is the only one which has anything approaching adequate training facilities. Even here, where a good near-by city school building of modern type supplements the locally maintained training school, this department is seriously handicapped for lack of a good training school building and a sufficient number of supervisors. The crying building need of each of the normal schools, after some plastering, kalsomining, painting, and repairs have been made to the main building, is the erection of a good elementary school building. This would relieve the congestion now obtaining in all of the main buildings of these institutions and afford room for laboratories and many other purposes.

The prospective teacher should have an opportunity to participate in public school work which is carried on in a normal way. The teaching of small groups of from 3 to 10 children, the observation by student teachers of the teaching of other student teachers, the scrappy teaching of a single period per day by a student teacher, and the demonstration or illustrative lesson are all by no means to be underestimated. Directed teaching in a school which is conducted primarily for the training of the children who attend it and which is conducted in the normal fashion, in which the prospective teacher will actually be called upon to conduct one, is of inestimable value. To this end a normal school should be provided with means whereby its practice facilities may be enlarged to include student teacher service rendered to public schools in the city where the institution is located, in near-by towns and cities, and in rural schools, particularly in consolidated rural schools of the modern type.

A model consolidated rural school with a set of model buildings for home and farm should be provided for each of the normal schools. This would render a great service to the State in many ways, besides training rural teachers and inspiring teachers to take up rural teaching.

Sanitary conditions of the normal schools.—The location of each of the State normal schools of class A is satisfactory from the point of view of sanitation. Good water and sewer facilities are provided. Great improvements could be made in toilet facilities. Excepting in the ladies' dormitories an adequate number of lavatories with plenty of soap and towels were not available at any school. Children can not possibly be taught the most simple lessons of personal sanitation without these inexpensive facilities. A standard commonly accepted as good is one seat and one lavatory for every 15 girls and one seat and one urinal for every 25 boys, with a lavatory for every 15 boys. Although the walls and floors were in great need of repair not a case of obscene markings was observed.

Extension departments and bureaus of research.—The work of the normal school should not be limited to the training of prospective teachers. Teachers in service need much aid which teacher-training institutions should be equipped to give. This will be especially true if the State carries out the proposed plan of making professional training a prerequisite to certification. Many lines of extension service are carried on by teacher-training institutions and a great field awaits the normal schools of Alabama when means are placed at their disposal for fulfilling their complete function.

In recent years instrumentalities have been devised for evaluating educational achievements and methods of teaching. In the standard tests and measurements now available a teacher or supervisor has means for diagnosing educational situations and finding remedies for discovered defects. A great field of experimental education has been opened up and no teacher's professional preparation is complete without a knowledge of these instruments and the possession of skill in their uses. Normal schools which are not familiarizing their students with these experimental studies and helping them to acquire skill in using their results are failing in a very important function. The State, however, can not expect the teacher-training schools to make researches or render public service in these experimental and scientific ways without providing the necessary equipment and helpers. As the total expenses of such a bureau are relatively small and much of the statistical work will be gladly done by students in training, it is to be hoped that means may soon be provided by which the normal schools of Alabama may render valuable service to schools and teachers in making diagnoses for them and offering their services through these means.

The normal school at Florence.—The State normal school at Florence is the oldest in the State, having been founded in 1873. While its geographical location would appear from the map to be disadvantageous, the statistics of its attendance tell a very favorable story. This school is in great need of land. It has an excellent and comprehensive building plan, which, if carried out, and if adequate means be placed at its disposal, will make of this school one of the best of its kind, not only in the South, but in the entire country. Similar statements may be made concerning each of the other class A normal schools.

There are enough public-school children and schools in Florence and the neighboring city of Sheffield to furnish the best of practice facilities for a large teacher-training school. A splendid spirit of cooperation exists between the school and the community as evidenced by the facts that a large modern public school has recently been built near the normal-school campus and practice facilities are freely offered, under proper safeguards, for the normal school.

Among other evidences of cooperation between the school and the community are two well-built dormitories which the people of the city have erected for the use of students and teachers of the school.

The most urgent financial need of the school is an appropriation of $10,000 for repairs, furniture, and equipment for the main building. Much new plastering is needed, some new floors and woodwork, considerable additions to the toilets and much painting and kalsomining. These statements apply with more or less force to the main buildings of each of the class A normal schools.

A good training school should be provided at once for reasons already given. A suitable building could be built and equipped for from $40,000 to $50,000. It is estimated that the land needs of the school could be met for $30,000. Unhappily, this school is struggling under the handicap of an interest-bearing indebtedness of $37,859. This should be promptly liquidated by the State as a matter of sound business management.

A model consolidated rural school with other suitable buildings should be provided.

A good gymnasium, a school hospital, and a president's home are greatly needed.

To advance the salaries even moderately, to employ some additional teachers, and to provide proper upkeep and repair of buildings an increase of at least $10,000 should be made to the annual appropriations of this school.

The normal school at Jacksonville.—There is no pressing need for much additional land for this school, as the site is reasonably adequate and the school is fortunate in possessing a valuable farm. This farm is of great value in the demonstration of different farming methods and of various home, sanitation, and other rural conditions. It is also of economic value to the school in supplying products for the dormitory tables.

All that was said concerning the building needs of Florence applies with equal force to Jacksonville. No utilization of local public schools is made for practice teaching. Such arrangements are needed at the present time, and as the school grows larger student-teacher services should be rendered not only in the local schools but in neighboring cities. The establishment of a model consolidated rural school, as suggested for Florence, is needed here also. Some increases should at once be made in salaries and a few additional teachers employed.

The normal school at Livingston.—The visitor to this school is at once favorably impressed with the extreme neatness manifested throughout all of the buildings, and the shrewd business management shown in adding to the school's properties and in conserving its resources. The school possesses a number of wooden buildings which, while not adding to the attractiveness of the school plant nor lessening the fire hazard, nevertheless render a valuable service to the school. The grounds of the school need very appreciable enlargement, and considerable acreage should be added to the small farming property of the school.

The practice facilities at this school are more limited than those at the other class A normal schools. This, however, is owing entirely to the fact that the school is located in a small town. Excellent local cooperation exists, and the community has placed all of the public schools at the service of the normal school. As the school grows larger this limitation will be felt, but there are near-by villages and not distant cities where student-teacher service may be rendered which will prove mutually advantageous. The immediate handicap to the establishment of amicable and mutually advantageous cooperation of this kind is the lack of good roads in this vicinity. There is every reason to believe, however, that the good-roads movement will progress at a rate commensurate with the growth of the school. In the meantime the good train service existing may be taken advantage of in reaching these towns and cities. The development of good roads will also facilitate rural teacher-training plans which need to be worked out here as elsewhere.

All that has been said concerning building and budgetary needs at Florence apply to Livingston excepting that the main building seems to be in a slightly better state of repair.

The normal school at Troy.—This school suffers a severe handicap in its location in annoying proximity to a railroad over which many trains pass daily. The grounds are also greatly cramped. It is imperative that the campus be enlarged and plans be adopted for buildings to house the training school and most classes at places more remote from the din of railway traffic.

The main building is in a state of even greater dilapidation than any other normal buildings in the State. The State can ill afford to permit its public buildings to deteriorate to the condition of this building. An appropriation of $15,000 should at once be made to put this building into suitable condition.

Summary of financial needs.—As the needs of the class A normal schools are very extensive and the legislature does not have the means at its disposal to supply all of these needs at once, the following program of appropriations is proposed for the following quadrennium:

TABLE 61.—*Proposed program of appropriations.*

	Florence.	Jacksonville.	Livingston.	Troy.
Appropriation for 1919-20:				
For operation	$25,000	$25,000	$25,000	$25,000
For maintenance	10,000	10,000	8,000	15,000
For capital outlay—				
Training school	40,000	40,000	40,000	40,000
Land	20,000	10,000	15,000	15,000
Indebtedness	38,000	...	...	...
Appropriation for 1920-21:				
For operation	30,000	30,000	30,000	30,000
For maintenance	5,000	5,000	5,000	5,000
For capital outlay	15,000	15,000	15,000	15,000
Appropriation for 1921-22:				
For operation	40,000	40,000	40,000	40,000
For maintenance	8,000	8,000	8,000	8,000
For capital outlay	40,000	40,000	40,000	40,000
Appropriation for 1922-23:				
For operation	50,000	50,000	50,000	50,000
For maintenance	8,000	8,000	8,000	8,000
For capital outlay	25,000	25,000	25,000	25,000

While the training school as at present constituted is not adequate for the present needs of the school, there are public school facilities immediately available in the community, if mutually advantageous cooperative plans are adopted, to serve the needs of the school for some time to come. As is the case at the other normal schools, facilities for rural school training should be provided, and for this purpose the means at the disposal of the school should be increased. The general building and budgetary needs are very similar to those of the other class A normal schools.

Normal-school course of study.—The present courses of study for the class A normal schools have been worked out very carefully and follow generally accepted principles. Only a few suggestions occur to the committee as sufficiently important to be mentioned in this connection. In the four-year courses for those who enter with two years of high-school credit there are courses in solid geometry and trigonometry required of all students. This does not conform to the best practice in State normal schools, nor is it a requirement based upon modern conceptions of education and professional training. In place of these academic requirements it is suggested that the students be permitted to make elections. As the attendance increases and the faculty and facilities of the schools permit the offering of additional courses, it is suggested that they be grouped on the basis of the kind of teaching for which the student is training, such as rural schools, primary, kindergarten, intermediate grades, etc., rather than a grouping on an academic basis, such as scientific, mathematics, history, civics, etc.

When training for departmentalized teaching can be offered, differentiation in the way of academic electives or academic groupings might well be offered in a course for training departmental teachers. The present plan of combining courses on a basis of subject matter and on basis of teaching positions to be filled doubtless works out satisfactorily.

II. NORMAL SCHOOLS OF CLASS B.

Two normal schools are not accredited and are designated as class B normal schools. The State appropriates only $5,000 annually for each of these schools and there are almost no other resources available for their maintenance and operation. With the stigma of being designated as nonaccredited second-class schools—for this is the practical effect of the classification—and the lack of means to carry out any attractive programs of work, these schools have most serious handicaps. These facts should be borne in mind by those who unjustly criticize the schools.

Normal school at Daphne.—This school is located on a most beautiful site overlooking Mobile Bay. There is probably no place in the

State having a more delightful climate. This fact is evidenced in the numbers of tourists who frequent this section from the North in winter and from the South in summer.

Theoretically, the location is ideal for a fifth State normal school. It is 135 miles by air line from Troy and 132 miles from Livingston. The school is easily reached from Mobile by a boat ride across the bay. As a matter of fact, however, so far as actual travel is concerned, it is located at a place little frequented, save by tourists, as is usual with places off the railroad and not along lines of commercial travel. The problem of adequate practice facilities, which is serious enough at some of the other normal schools, is almost an unsolvable one, as the community is very small.

By heroic efforts the management of the school has provided some practice facilities and some dormitory accommodations, and has made some needed improvements, and the school has had a better attendance and rendered a better service to the State than the State has any right to expect from its pitifully small financial support.

Normal school at Moundville.—This school is much less fortunate in its location than is Daphne. It is only 43 miles by air line from Livingston and only 14 miles from Tuscaloosa, the seat of the State university. The same statements which were made concerning the school at Daphne may be made regarding this school, so far as concerns practice facilities, the vigorous efforts of the management, and the service rendered to the State under such serious handicaps.

Specific recommendations relative to disposition of the class B normal schools.—The survey committee can find no possible alternative recommendations for these two schools than that they be converted at once into county high schools according to the terms of the present law. This will give them funds far more adequate for the purposes of a high school. If the State wishes to add more normal schools, they should be located at such strategic centers as Selma, Montgomery, or Birmingham. The wisdom of adding any more normal schools at the present time or in the near future is certainly very questionable.

III. COLORED NORMAL SCHOOLS.

The State has made provision for training colored teachers at the State Normal School at Montgomery, at Tuskegee Institute, and the Agricultural and Mechanical Arts College at Normal. In addition to these there are several private colored schools, such as Talledega College, Burrell Normal School, etc. Of these schools Talladega College is the only one that is accredited.

While it is commendable to hold the same standards for the colored as for whites, the survey committee is convinced that a larger recognition should be accorded these schools. Since none of the nonaccredited schools have courses extending beyond the eleventh grade. the same scholastic rating that is accorded the class A normal schools could not be granted; nor is it expected or desired by the management of these schools or by the colored people, who insist most logically and properly that no lower standards be set up for them than for the white people. On this principle all are agreed, and it should be applied as far as possible. However, because rating of these schools can not be granted on a par with class A normal schools until the school work measures up to the same standard, it does not follow that there is no middle ground. There would be no violation of the established principle or lowering of any standards of such schools if the State Normal School at Montgomery and Tuskegee Institute should be accredited and their graduates granted second-grade certificates. It is the recommendation of the committee that this action be taken at once. It would be a great encouragement to the young people who are planning to teach to attend these schools and to continue their attendance until they are graduated.

Normal school at Montgomery.—The State normal at Montgomery is fortunate in being located at the capital of the State. A better site might have been chosen, but with the addition of land recently acquired there is room for a very considerable growth. The school should have a farm both for the purpose of education and demonstration purposes and for food supplies for a boarding department.

As the city of Montgomery does not maintain a colored high school. the colored youth of the city who finish the seventh grade and who wish to continue their education attend this school. Criticism is occasionally heard because of the fact that the city takes advantage of the presence of this State institution to escape taxation for a colored high school. Whatever defects may exist in this regard should not in any way militate against the school. The fact is, that the majority of the students attending the school have a bona fide intention of teaching and the State becomes the beneficiary by reason of local attendance.

The fact that from the point of view of attendance the school is largely a local institution is not altogether due to the failure of the city to maintain a colored high school. The State has made no provision in the way of dormitories for housing out-of-town students. An appropriation for a suitable dormitory for young women should be made at once if the school is to remain in Montgomery.

The survey committee urgently recommends that adequate facilities for industrial and agricultural training be at once provided. The facilities at hand permit only a little elementary cabinetmaking and a limited amount of home economics and handicraft work. While this has its value it should be remembered that the school world has long since come to a far-reaching conception of education through industrial and vocational preparation and functioning. If this kind of program is suitable for the white race, there can certainly be no arguments against its need for the colored race. Not only should these facilities be provided for the sake of the young people who attend the school, but even more so for the benefit of the children in the schools taught by the graduates and students of this normal school.

With a splendid institution like Tuskegee Institute only 40 miles away it might not be necessary for the State to build a great plant at or near Montgomery for teacher training. The broad and far-reaching conception of the imperative needs of the colored race of which Tuskegee is the exponent should be borne in mind in making provisions for other schools, and the method whereby better types of training can be brought about should not be so completely wanting at the State normal school at Montgomery by reason of lack of equipment and funds. The State of Alabama can make no better investment than in providing a suitable type of industrial teacher training for colored teachers. Had these paragraphs been presented without amendment and qualification a few years ago some citicisms would have been offered on the ground that they imply that the only educational needs of the colored race are physical and economic. Happily, no disputes now arise over the conception of the school in terms of linking up education with life, of motivating its processes by the solution of actual rather than artificial problems; in short, of conceiving education as cross-sectioning life rather than constituting a separate strand of it. It is with this view of education in mind that the committee conceives an adequate school equipment to include much more than rooms with seats to be used by students in classes which meet to recite from books.

The survey committee earnestly recommends that the appropriation for the maintenance and operation of this school be increased by 50 per cent as a minimum.

Tuskegee Normal and Industrial Institute.—This splendid institution is widely and favorably known throughout the educational world and the committee gladly confirms the excellent reports concerning it. The school is almost entirely maintained from endowment and other private funds, receiving only $4,000 annually from the State.

That the State could wisely expend many times this sum in furthering teacher training at this school goes without saying. The committee gladly recommends that a substantial increase be made, but only on condition that its expenditure be under the direct supervision of the State. The committee has no criticism on the present management of the school as a private corporation under a self-perpetuating board: but as a principle of public policy it is not advisable for the

State to appropriate any considerable funds to such an institution without exercising a direct control over their expenditure. On the other hand it should be borne in mind that Tuskegee Institute is in a sense a national institution, has considerable endowments which are growing year by year and it may be seriously questioned whether the State could as well administer such an institution as is done under the present arrangements. A considerable appropriation by the State might have the unfortunate effect of cutting off larger benefactions from other sources. The complete control by the State might interfere with the prosecution of certain types of service to the colored race which transcend State bounds. The committee is in full accord with the ideals of the administration of the school and believes the legislature is like minded on this subject. It may well be that the best policy for the State to adopt is that which has been consistently followed of keeping its hands off the administration of the school, but of rendering such financial aid as will not in any way act as a deterrent to private contributions and of exercising only a nominal control over such expenditures. The committee believes that the present annual appropriation of $4,500 might be doubled, but seriously questions the advisability of doing more at the present time.

The recommendations as to the accrediting of the school are again urged by the committee. This can have none other than a strengthening and promotive effect.

Summary of recommendations.—1. That professional training be required as a prerequisite to the issuance of teachers' certificates, the standard being gradually raised to avoid teacher shortage and protection being afforded experienced and skilled teachers now in service.

2. A requirement that members of boards of control of an institution be not residents of the county in which the institution is located.

3. That a pension and emeritus system be established for teachers.

4. That the program of appropriations recommended be adopted for buildings, repairs and equipment, and increases for maintenance and operation of State normal schools.

5. That minor changes be made in the courses of study as indicated.

6. That the class B normal schools be converted into county high schools.

7. The accrediting of the State normal school (colored) at Montgomery and Tuskegee Institute, the addition of a school farm, buildings and equipment for the former and increased appropriations for both.

Chapter XX.

HIGHER EDUCATION IN ALABAMA.

In Chapter I it was pointed out that Alabama is a State of immense latent resources. It belongs to the very small group of States that combine three wholly different varieties of natural wealth. It is a great agricultural State, with a wide range of soil and climate capable of growing agricultural products of the utmost diversity. It is a great mineral State. Its vast deposits of coal, iron, marble, graphite, and limestone give it potential rank among the foremost mineral producing States in the Union. Moreover, Alabama possesses an abundance of water power, so located, for the most part, as to be accessible for manufacturing, mining, and the operation of public utilities. This unusual conjunction of native resources is rounded out and made complete by a series of navigable rivers which tap both the agricultural and industrial areas and can, if utilized, carry the products of these areas either into the Ohio Basin or to the State's own important seaport on the Gulf.

And, yet, Alabama is poor. It is an almost incredible paradox, but nevertheless an undeniable fact. The State has not enough money to give its employees appropriate compensation or to support its institutions of public welfare, its public schools, and its agencies for higher education. The legislature has been liberal, especially to education. Within the limits of its ability it has made generous appropriations, especially to the higher educational institutions. On at least two occasions it has even appropriated more money than it had. But in spite of this the institutions have starved. They have starved in the midst of plenty, because the State is poor. Certain citizens of the State are rich. Citizens of other States are rich and growing richer from Alabama's wealth, but the State languishes and lags behind the rest of the Union for the want of a few million dollars a year.

The outside investigator confronting this curious paradox naturally seeks the reason. Why should a State with boundless resources, most of which are already being developed, be unable to finance those essential activities upon which its true prosperity depends? The reason lies clear to view. Only an insignificant fraction of the State's real wealth is taxed. The State levies what taxes it collects—

and the rate is not exorbitant—on a small percentage of the true value of property. There are no income taxes, no excess profits taxes, no inheritance taxes.

In Alabama the large individual property holder and the big industrial corporation find a sanctuary safe and secure. They enjoy a happy immunity from the distasteful obligation of contributing to the public welfare that reasonable proportion of their wealth which most other States demand. The smaller property holder appears to enjoy equal immunity. In any event, both large and small owners unite to preserve the status quo. Past attempts to alter the revenue system of the State have, with few excepions, been defeated. There has been bred and fostered in the public mind a superstitious dread of taxation which permeates all parts of the body politic and is shared even by those who have nothing to tax. Thus, we have the extraordinary spectacle of a State that deliberately keeps itself in poverty in order that a few may reap rich profits; that neglects to develop that human material on which its very strength depends; that allows its mighty stores of natural wealth either to lie idle or to pass into the hands of outsiders and colonists.

These matters are discussed in detail later in the report. (See Chapter XXIII.) They are touched upon here because of their particular bearing on higher education. The State's agencies for higher education are not what they should be. They are not adequate to meet the State's urgent and immediate needs. In range of instruction and capacity to accommodate students they do not compare favorably with those of other States of similar population. Relatively they are not well equipped. Moreover, there are no strong private colleges or universities within the State to supplement the deficiencies of the public institutions. These facts will presently be shown in some detail. They are no secret, however. Nor do they constitute any reflection on the officers of the State's higher schools. In the face of almost unprecedented handicaps, at the cost of great personal sacrifices, the faculties of these institutions have succeeded in furnishing a sound and worthy training to those few who could resort to them, and in preserving in some measure the educational reputation of the State.

Alabama can repair the deficiencies in higher education in just one way, namely, through the reform of the system of taxation. Unless the recommendations made in Chapter XXIII are adopted, or unless by some other means substantially equal sums are secured for general appropriations, the State must continue to starve its higher institutions. It must reconcile itself to a position of educational inferiority. There is absolutely no other method of providing these institutions with the support which they need and which the State needs them to have. If the steps advised are not taken, the legislature may, to be sure, from time to time increase the appropriations to one or all of the higher schools by slight amounts. For example, it may even find the money to meet their present very modest budgets. But this would be a palliative, not a remedy. It would not insure their continuous development in accordance with the demands of the State. The recommendation relating to the increase of taxation is therefore basic to this report. On its acceptance all others depend. Unless it is adopted, the survey, as far as it concerns the higher institutions, will have slight value, or none at all.

The committee is persuaded, however, that the recommendation will be adopted. It can conceive of no justification for the expenditure of the considerable sum of money the present investigation has cost, the summoning of numerous advisors from without the State, the large sacrifice of time and strength by a group of the State's most distinguished citizens, except that the State intends to abide by the conclusions. The people of Alabama are justly proud of their past. Their ancestors have made significant contributions to American history. Ever since its foundation the State has furnished some of the foremost leaders of the South and of the Nation. In the crisis through which the country has just passed Alabama has given a rare demonstration of patriotism. It has freely spent its treasure and the more precious lives of its sons in the national defense. It has a high and honorable record among the States. It now faces a more prosaic, and hence more difficult task. It must continue to make present financial sacrifice in order to meet its obligations to its future citizens and leaders. The committee is confident that the people of Alabama will respond with equal cheerfulness to this new appeal to their patriotism. On the strength of this confidence it offers the following analysis of the State's higher educational problems, with recommendations as to their solution.

Higher educational needs of Alabama and the relation of existing institutions to them.—The development of State higher institutions and the character of the instruction that they offer are conditioned by the social needs of the State in which they are located and by the facilities for secondary training which the State affords. Some State universities and colleges meet the State's needs for higher professional and general training adequately. Some, through lack of insight or lack of support, fail to do so. What are the real needs of Alabama in the field of higher education? The committee has found them singularly hard to determine. There are several reasons for the difficulty; namely (1) the fact that it is 10 years since census material was collected, and in the interval the State has undergone great economic changes; (2) the apparent failure of civic and professional bodies to study the question; and (3) the poverty-stricken condition of the university and the polytechnic institute which has prevented them from making those inquiries into the needs of their constituencies which might suggest the desirability of costly expansions. But even without reliable statistical information, certain of the State's needs are obvious.

AGRICULTURE.

According to the last census approximately 82 per cent of Alabama's population lived in rural communities. There were over 20 million acres of land in farms and over 262 thousand farmers. The total value of crops was over 144 million dollars. The estimated value of the crop in 1918 was 358 million dollars. These figures are large absolutely, but small in relation to what they might be. But a fraction of Alabama's productive land is now under cultivation. Very little of that which is cultivated has been brought to its maximum productivity. Moreover, the State is ravaged by destructive pests which make constant inroads on its most valuable crops. It is clear that in addition to the need already discussed for agricultural instruction of secondary grade (see Chapter XI), the State's vital interests demand the maintenance of a strong agricultural college, with ample provision both for teaching and experimentation. Such a college should turn out hundreds of young men a year equipped with the most modern scientific knowledge, prepared to be the leaders in this the State's most important industry. It should be the center for research into all those problems of agricultural production which particularly affect Alabama.

Has the State such a college? The Alabama Polytechnic Institute, the State College of Agriculture and Mechanic Arts for whites, established in 1872, has maintained courses in agriculture for approximately 46 years. At the beginning of this period instruction in agriculture was not of college grade anywhere in the United States. The science of agriculture has been gradually developed by the agricultural colleges and experiment stations. The organization of it into genuine collegiate curricula has taken place within the past 20 years. For reasons which it is not pertinent here to discuss, the Alabama Polytechnic Institute was somewhat slower than its sister institutions in other sections of the country in placing its agricultural courses on a definite collegiate basis. Only within the past decade could these courses be rated as truly college courses. During the past 10 years the college has graduated 184 men whose present occupation is agriculture. If there be added to these the small number now engaged in teaching agriculture, the yearly average output of the institution is still less than 20. Veterinary medicine may be counted as allied to agriculture. If the 122 graduates in veterinary medicine during the past 10 years are included in the total number of college-trained men that this institution has turned into the agricultural industry in a decade, the annual average is but slightly over 30.[1] Of the last two graduating classes, 44 and 45 men, respectively, received degrees in agriculture, and 23 and 17 in veterinary medicine. The total enrollment in agricultural curricula during the past academic year was 206. The college has also had, of course, a considerable number of students in these curricula who did not graduate.

Could the college care for more students in agriculture? Probably a few. It is patent that the emphasis has always been laid on training in the mechanic arts rather than on training in agriculture. This is due to a variety of reasons. For many years agriculture was regarded throughout the country as a less respectable and worthy calling. This attitude toward it still prevails in parts of the South, perhaps particularly in Alabama, although happily it has largely disappeared elsewhere. Colleges are in part products of their environments. But if they fulfill their true functions, they also mold their environments. They lead the minds of the people. They alter public opinion. They reveal to a community its potentialities and its obligations. The Alabama Polytechnic Institute can not escape a certain share of responsibility for the failure of the State to provide adequate training facilities for its principal industry. If the college had had the vision, undoubtedly the State would by now have caught a dim reflection of it.

But omelets can not be made without eggs to break. A glance at the State's contributions for the support of the Alabama Polytechnic Institute shows how little the college could have done, no matter what its convictions and intentions. It also shows that the financial situation of the Alabama Polytechnic Institute is in one respect absolutely unique. The college has not received a dollar of direct appropriations solely for purposes of agricultural instruction. Every item of the State's appropriations is in compensation for services actually performed which furnish the State an immense monetary return. As a revelation of parsimony and short-sightedness this situation is impressive enough. But consider what it means in the management of an educational institution. A large proportion of the institution's departments have as their first obligation something other than instruction. The inspection and analysis of agricultural materials or products for the benefit of the State must be attended to before the college may proceed with its regular business. Teaching is reduced to the level of a by-product. The committee will shortly make specific recommendations covering the State's future policy in this matter. At this point it is sufficient to make note of the fact and of its bearing on the development of the State agricultural college.

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[1] Many of these men are, of course, no longer residents of Alabama. State institutions always train many who practice their professions elsewhere. This wastage is to be counted on. The majority of graduates of the State institutions usually remain in home State.

What about provisions for research and experimentation? Fortunately for Alabama the Federal Government supports by an annual appropriation of $30,000 an experiment station in connection with each agricultural and mechanical college. In most States which are predominantly agricultural this basic sum is supplemented by large State appropriations. It has been frequently and abundantly demonstrated that for every dollar spent in agricultural research hundreds or thousands of dollars are returned to the State in increased production. Alabama, however, has been content to let the Federal Government fight the boll weevil and discover the proper types of crops for each of its many diversified regions largely unaided by State contributions. The State's appropriations for agricultural experimentation have been insignificant. In spite of the exceptional ability of the investigating staff of the Alabama Polytechnic Institute—ability which is recognized throughout the Nation—progress has been dishearteningly slow. Problems that are crying for solution must remain untouched from year to year for want of men and means to solve them.

Certain conclusions present themselves. Only a fraction of the State's needs in professional agricultural training and in agricultural research are now met. It would be absurd to consider a small increase in the size and scope of the agricultural college. If the college were trebled or quadrupled in size it would still fall far short of the service which the State absolutely requires. The State must enlarge its whole concept of higher agricultural training. It must put sums of money into the equipment and maintenance of this institution which by comparison will make its previous contributions look like the widow's mite. And it must see that they are spent for agricultural education and experimentation. The college, on the other hand, should revise its attitude toward agriculture. It should recognize that in the near future, if its true obligations are to be fulfilled, the supreme emphasis must be laid on training leaders in the field of scientific agricultural production and rural life.

ENGINEERING.

But the State of Alabama is experiencing that shifting of the center of gravity from the country to the city which has taken place all over the United States. The change has come late, but it promises to be rapid. Probably the next census will show an increase of at least 10 per cent in the urban population. The reason is the sudden development of mining and manufacturing. Already Alabama stands "third among the States in the production of iron and ore, fourth in the production of pig iron, sixth in the production of coal." The great Birmingham district is apparently just at the beginning of its growth. It requires no stretch of the imagination to picture it as one of the leading industrial centers of the country.

At the same time the rise of the shipbuilding industry and large port developments are taking place at Mobile. The sources of water power are being exploited and utilized in these centers and in building up the milling industry in places of lesser magnitude.

These facts point unmistakably to another great need in professional education. Alabama needs engineers. It will need ever greater numbers of engineers. Not only the industrial development just mentioned, but also the whole experience of the United States in the war combine to raise engineering to the first rank among the professions for which a State such as this must train men. Engineering science is apparently just on the eve of a tremendous development. New applications of it to the whole process of production are just about to be made. It is entering the field of industrial organization and even the field of business. The term engineering has already ceased to represent a narrow specialty or a combination of narrow specialties. Instead, it is coming to signify a method of handling the complex problems of production and human organization. This evolution has been greatly stimulated by the war. The war as a whole was a gigantic enginering undertaking. A large percentage of its component enterprises were engineering pure and simple. It furnished an impressive object lesson of the wide applicability of the engineering method. Not the least part of that lesson was the demonstration of the similarity of the factors which make for success in all operations involving the mastery of materials, whether in war or in peace. It is not surprising, therefore, that engineering has cast its spell over young men and that larger numbers than ever before are apparently going to seek this type of training, whatever their ultimate professional goals. That a State like Alabama in a time like that upon which the country is entering needs extensive agencies for engineering education is self-evident.

What agencies has it? There are two—the Alabama Polytechnic Institute, which is the State College of Agriculture and Mechanic Arts, and has cultivated engineering since its establishment in 1872, and the University of Alabama, which has offered engineering courses continuously since 1881. Such courses had, however, been offered sporadically since 1861. Of the graduates of the last 10 years the Alabama Polytechnic Institute reports 351 now engaged in engineering, the University of Alabama 52. The total enrollment in engineering curricula at the Alabama Polytechnic Institute for the last academic year was 386, at the University of Alabama 115. Both institutions, but particularly the Alabama Polytechnic Institute because of its larger numbers, have sent engineering graduates all over the country, many of whom occupy distinguished positions in the profession. Whether the numbers now in training in engineering at these two institutions are sufficient to meet the needs of the State—counting on the emigration to other States of a certain considerable percentage—the committee is unable to say. To determine this question with any degree of accuracy would necessitate a long investigation, for which the committee had neither the time nor the facilities. If it might judge by the casual testimony it received—and there was a good deal of it—the Birmingham district alone could absorb, and is eager to absorb, a much larger number than is annually available. The committee concludes, therefore, in spite of the fact that the State maintains two engineering schools, it is not oversupplying its present needs and must greatly increase the output of engineers before it can meet its future needs.

TABLE 62.—*Enrollments in engineering at the University of Alabama and the Alabama Polytechnic Institute for the 20-year period from 1899–1918.*

Year	First degrees conferred.		Graduate students.		Seniors.		Juniors.	
	Univ. of Ala.	Ala. Pol. Inst.	Univ. of Ala.	Ala. Pol. Inst.	Univ. of Ala.	Ala. Pol. Inst.	Univ. of Ala.	Ala. Pol. Inst.
1898–99	1	14	1	5	1	16	6	25
1899–1900	4	20	1	4	7	21	6	35
1900–1901	3	30	3	1	4	34	1	32
1901–2	0	26	4	3	0	28	4	33
1902–3	4	24	0	5	4	25	4	48
1903–4	3	31	3	5	5	38	9	59
1904–5	2	41	2	9	4	50	2	52
1905–6	4	38	6	14	1	42	4	62
1906–7	2	45	3	5	0	59	3	57
1907–8	7	58	0	3	0	55	7	75
1908–9	7	51	0	17	3	65	10	80
1909–10	3	54	0	8	4	71	6	73
1910–11	8	55	3	6	15	67	9	70
1911–12	2	53	6	9	6	61	5	90
1912–13	4	40	2	9	5	71	12	77
1913–14	6	46	2	6	8	64	15	89
1914–15	5	41	4	14	9	65	22	82
1915–16	8	58	1	17	13	70	11	59
1916–17	5	52	4	7	6	50	14	61
1917–18	2	43	0	4	6	49	13	69
Total	78	820	45	151	101	1,001	163	1,228
Yearly average	3.9	41.0	2.2	7.6	5.0	50.0	8.1	61.4

Year.	Sophomores.		Freshmen.		Specials.		Total enrollment.	
	Univ. of Ala.	Ala. Pol. Inst.	Univ. of Ala	Ala. Pol. Inst.	Univ. of Ala.	Ala. Pol. Inst.	Univ. of Ala.	Ala. Pol. Inst.
1898–99	0	40	0	42	0	6	8	134
1899–1900	0	35	0	61	0	9	14	165
1900–1901	0	41	0	50	0	10	8	168
1901–2	0	57	0	52	0	12	8	185
1902–3	0	45	0	57	1	8	9	188
1903–4	0	62	0	72	5	13	22	249
1904–5	8	67	6	79	0	11	22	268
1905–6	3	83	16	86	2	17	32	304
1906–7	8	74	16	81	5	13	35	289
1907–8	14	79	25	78	3	11	49	301
1908–9	9	94	22	70	4	16	48	342
1909–10	13	86	19	72	9	19	51	329
1910–11	9	87	24	65	8	11	68	306
1911–12	16	94	22	76	19	9	74	339
1912–13	18	97	38	72	9	7	84	333
1913–14	29	102	35	75	5	7	94	343
1914–15	24	63	36	98	4	8	99	330
1915–16	33	67	38	145	3	11	99	369
1916–17	29	102	48	159	2	24	103	403
1917–18	41	94	55	155	0	15	115	386
Total	254	1,469	400	1,645	79	237	1,042	5,731
Yearly average	12.7	73.5	20.0	82.3	3.9	11.9	52.1	286.6

But with this conclusion the problem of the State's policy with reference to engineering education is by no means settled. Only a single superficial aspect of it is touched upon. The most serious phase of the problem lies in the existence of two State-supported engineering schools. The existence of two schools means division of the State's effort, with a consequent loss—temporarily, at least—of efficiency. It means rivalry before the legislature for appropriations, competition for students, expensive duplication of high-class men and equipment, institutional jealousy and misunderstanding, and all the wretched chapter of discord which is the present lot of nearly every State where similar conditions prevail. Escape from these evils seems well-nigh impossible as long as the two schools have approximately equal support or may pretend to approximately equal standing. At any rate, no State which divides its engineering effort has been able altogether to escape them. The only clean-cut solution appears to be the abandonment of engineering at one institution and the concentration of it at the other. In two of the five cases where the Bureau of Education has been called upon to arbitrate this question it has suggested this solution. It may be noted that the officers and partisans of the Alabama Polytechnic Institute would favor this solution in Alabama provided, of course, that engineering were concentrated at the institute; and that the officers and partisans of the University of Alabama would be equally ready for it, provided engineering were concentrated at the university. Probably all would agree that if the State gave no engineering education and were to establish it now for the first time it had better be centered in one institution.

Is such concentration now possible or desirable? The committee believes not. The bases of its belief are worth setting forth. The reasons for not concentrating all engineering education at the Alabama Polytechnic Institute are (1) the disastrous effect which this step would probably have upon the development of the university and (2) the unfavorable location of the Alabama Polytechnic Insitute for certain types of engineering instruction. The reasons for not concentrating all engineering education at the university are (1) the fact that engineering is closely allied to modern agriculture and that adequate instruction in the latter field is impossible without some facilities for training in certain of the engineering branches; (2) the traditional position of engineering as a coordinate part of the work of land-grant colleges; and (3) the admirable record of the Alabama Polytechnic Institute as a training school for engineers. Several of these reasons should be discussed in greater detail.

The University of Alabama more than many State universities needs applied science. The committee is very little impressed by the argument frequently presented to it, that if engineering were removed from the university the prestige of the institution would be lowered and in consequence of this humiliation its morale undermined. There is no personal or institutional rebuke involved in readjustments of the State's educational system which are advantageous to the State. It is for a wholly different reason that the University of Alabama needs engineering. The might of tradition is the strongest influence in the life of an old institution. Tradition is unquestionably a most precious possession, but there are attendant dangers. The force of institutional tradition is generally against innovation. It would preserve unaltered the standards and practices of the past. It is blind to the new demands of a changed social environment, which must be met by other educational methods. Now the peculiar obligation of a State university is the obligation to keep constantly abreast of the social needs of the State; constantly to adapt the training it purveys to those needs; to be the interpreter of both the present and the future as well as of the past. Privately supported institutions may stand pat if they choose, and if they dare. A State university must ever be moving on, ever changing ground. The set of tradition at the University of Alabama, as at many old institutions North and South, is, unless the committee has been misled, in the direction of a literary and bookish training. The university has consequently had to combat a sentiment in the State that it is devoted to the interests of a limited class, and that it is remote from the life of the people. Engineering is the most vital bond with the life of the State. Both for the sake of its contacts with the State and for the sake of its own inner balance, it is therefore essential that the university conduct courses in the applications of science.

The second reason for the retention of engineering instruction at the university is the location of that institution. It is on the edge of the great mining and industrial district and relatively close to river-development projects and to sources of water power. Short of location in the immediate neighborhood of Birmingham itself, the university could scarcely be better situated for conducting engineering education. If the industrial area grows as is anticipated, it will inevitably become a center of higher technical training. It is appropriate that a State institution should become the chief agency for such training. The university is already in the field and may properly be that agency. Auburn, on the other hand, is remote from any industrial community. Its immediate environs offer no opportunities for engineering students either to observe or to participate in engineering practice except as it applies to agriculture. Engineering instruction is coming to be associated more and more with actual engineering operations. Factories, shops, and mines are coming to be for the engineering student what hospital clinics are for the medical student. A medical school can not exist without clinics. The committee ventures to predict that before long engineering schools will find industrial clinics as nearly indispensable to their existence. In its laboratories an engineering school is of course able to produce the essential conditions of scientific practice necessary to reenforce theoretical instruction. But it is the supplementing of the laboratory by the shop that is on the eve of general adoption. Incidentally this tendency will relieve engineering schools of a great burden of expense. The engineering school therefore which is located within an industrial district has the keys to the future.

To remove engineering instruction from a land-grant college is legally possible. The courts have several times affirmed the legal right of the State to redistribute the land-grant fund at its pleasure. It is, however, a practical impossibility to remove engineering from any well established land-grant college. Again the force of tradition comes into play. Sixty years of possession of the engineering field have given the land-grant colleges what is regarded as a vested right to engineering training. All efforts of their opponents to prove that Congress in 1862 did not intend to include engineering by the term "mechanic arts" have failed to shake their position. And it is fortunate for the country that this has been the case. The contribution of the land-grant colleges to the development of engineering education has been of inestimable value. But even if it were practicable to remove engineering from the Alabama Polytechnic Institute, it would, in the committee's judgment, be unwise. The interrelations of agriculture and engineering are growing constantly closer. The single land-grant institution which was established solely as an agricultural college has recently been obliged to introduce certain courses in engineering. If the forecast of the coming development of engineering science made at the beginning of this section is correct, engineering can no more be dissociated from agriculture in the future than from any other productive industry.

A contributory factor, although not by itself a determinative one, is the extraordinary line of distinguished engineers that have received their professional education at the Alabama Polytechnic Institute. It would violate the sense of fitness of every unprejudiced person in the State if an institution with such a record were to be shorn of its principal activity for the sake of promoting regularity in the State scheme of higher education.

Is the result then a complete *impasse?* If the officers of the two institutions will resolutely face the facts and will consent to treat the problem of engineering training as a State problem in which the institutions are but instruments and not the principal beneficiaries, a reasonable solution is possible. That the question has not been approached in this way is indicated by the present organization of the work of engineering instruction. The catalogues of the two institutions announce the following degree curricula in engineering:

Alabama Polytechnic Institute:	*University of Alabama:*
Civil engineering.	Civil and highway engineering.
Electrical engineering.	Electrical engineering.
Mechanical engineering.	Mechanical engineering.
Chemical engineering.	Chemical engineering.
Mining engineering.	Mining engineering.
Architectural engineering.	
Chemistry and metallurgy.	

In addition the Alabama Polytechnic Institute gives two-year courses in electricity, mining, and architecture and one-year courses in road construction and wireless telegraphy. The University of Alabama offers two-year technical courses designed to fit men for various vocations in the general field of engineering.

The most obvious characteristic of these offerings is their similarity. Duplication is as complete as possible, taking into account the fact that one institution offers only five degree curricula, while the other offers seven. A certain amount of duplication is inevitable if there are to be two schools of engineering. Duplication in engineering education is expensive and it entails other undesirable consequences. But the committee has already registered the opinion that it is less undesirable in Alabama than the concentration of engineering at one institution, which would put an end to it for all time.

Granting this, it is clear that the area of duplication should be reduced as much as possible. The experts in engineering education that the committee has consulted agree that some work in the four basic branches of engineering science, namely, civil, electrical, mechanical, and chemical engineering, should be carried forward in any institution which grants engineering degrees. Radical differentiation of the work of the Alabama institutions in these fields would probably not be feasible, at least in the immediate future. The committee conceives such differentiation to be possible within limits, however, as time goes on. For example, it may turn out that one institution is better equipped and better located to give thorough work in mechanical engineering than the other, and that therefore students desiring to fit themselves as mechanical engineers should be referred to it. But for the present duplication in these four branches must be accepted as one of the burdens the State must carry for having failed earlier in its history to organize its program of higher training more wisely.

The Bureau of Education's investigations in other States show that there is no more expensive form of duplication—unless it be in medical education—than duplication in mining engineering. The cost per student clock hour of instruction in mining engineering is generally nearly double that in any other engineering department. Duplication is also wholly unnecessary. There is no State that needs two schools of mining engineering. No mining school in the country has a large enrollment. There are, indeed, probably more mining schools in the United States than are likely to be needed for many years to produce an adequate supply of mining engineers. That Alabama with its meager funds for higher education should attempt to maintain two full-fledged degree-granting departments of mining engineering is a manifest absurdity, which is rendered still more patent by a consideration of the enrollments at the two institutions. Neither has ever enrolled more than a handful in this branch. In the last academic year the Alabama Polytechnic Institute reported six students in mining engineering, the university none. Here is one place where concentration can be effected with obvious benefit to the State.

The committee recommends that henceforth instruction in mining engineering be conducted at the university alone and that with it be associated the degree curricula in chemistry and metallurgy which the demands of the State warrant. It bases its recommendation on two grounds: The first is the location of the university in the mining district. The second is its slightly superior equipment for this work. In spite of the fact that the university has been less successful in the past in attracting mining students, the committee is convinced that the logic of the situation irresistibly designates it as the place where the State should center its effort in mining education.

Whether the State is justified in maintaining degree curricula in architecture and architectural engineering the committee is unable to say. It notes that this work and the plans for its development at the Alabama Polytechnic Institute are unanimously indorsed by the Alabama chapter of the American Institute of Architects. It records its doubts, however, and suggests that before any considerable effort in this direction is undertaken the needs of the State for architects and architectural engineers be studied by the State council of education and weighed against the needs in other fields of engineering.

The baleful effects of unregulated institutional competition on the development of a wise and far-sighted State policy in professional training are strikingly exemplified in the present situation of these two engineering colleges. The field of engineering as defined by the State's productive industries is little more than half occupied by both together, but it appears to the outside observer that neither has had sufficient power of detachment from the absorbing preoccupations of institutional rivalry to explore it with a view to efficient State service. There are at least four lines of engineering which the committee believes are essential to the future development of industrial production and which demand the attention of Alabama institutions if the latter are to fulfill their obligations to the State's productive interests. They are (1) agricultural engineering, (2) sanitary engineering, (3) textile engineering, and (4) industrial and commercial engineering. The committee is persuaded that investigation will show a well-defined need for intelligent leadership and training in all these lines.

The general outlines of a program for the future conduct of these two engineering institutions, a program which will not, to be sure, end unnecessary duplication at once but which will lead gradually to a definite differentiation, may easily be sketched. The first feature of it concerns intention and emphasis. The university should make the service of the mining and industrial district in which it is located its guide in the field of engineering education. (*a*) It should emphasize mining engineering and those other phases of engineering education which are contributory to it and which grow out of it. (*b*) It should develop hydraulic engineering and should serve as the State's principal agency for the solution of problems connected with the exploitation of water-power and for the training of experts in this field. (*c*) The university should develop as its means permit those newer applications of engineering science to industrial organization and management which have been referred to and which the Birmingham district demands. (*d*) It should apply itself also to the large scientific and economic problems connected with sanitation and to the training of sanitary engineers.

The field is large enough to tax the resources of an institution 10 times as well supported as the university. To cover a small segment of it thoroughly and effectively would be vastly more creditable than to stake off the whole area and to leave part of it unworked. If the objection should be raised that a fractional enterprise in engineering education is unworthy the attention of a first-class institution, the example of Stevens Institute of Technology may be cited, which devotes itself to a single engineering specialty and has won international distinction. A reorientation in its point of view toward engineering education is what the university needs. If the controlling factor in its program were the service of the State in this group of engineering enterprises and not the traditional conception of an orthodox engineering school, it would be in a position to make a far-reaching contribution to the development of the State and also to work out a valuable and distinctive effort in engineering education; one, moreover, that would probably not be duplicated by any other institution.

The application of the same principle and point of view to engineering at the Alabama Polytechnic Institute would result likewise in a general differentiation of its effort from that of the university. The Alabama Polytechnic Institute is, or should be, the State's chief agency for intelligent leadership in the organization and regeneration of the agricultural, textile, and highway interests of the State. The committee suggests that it make these obligations its guide. If its future policy in the organization of engineering training were shaped primarily by the demands of the State for highway construction, for increased agricultural, lumber, and live-stock production, and for the development of mill towns and the milling industry, it too would be able to make a unique contribution both to the State's industrial output and to its own educational strength.

Of course the success of such a program as has been outlined would depend in the first place upon a careful and impartial study of the State's needs in the field of engineering education, and in the second place upon a genuine effort by the two institutions to cooperate in meeting these needs. The first requisite will be provided for if the State accepts the committee's recommendations for a State Council of Education. The second can not be secured by legislative action, or indeed by exhortation. It may be furthered by the work of the State Council of Education, which will tend to emphasize the unity of the State's effort in higher education and the subordination of the interests of any institution to the interests of that effort as a whole. But the substitution of a spirit of cooperation for a spirit of competition and antagonism entails a rebirth. The issue is of importance. The State is justified in using any means however drastic to bring it to pass.

Before leaving this aspect of the subject there are a few ghosts that should be laid. Much time and effort have been spent by each institution in attempts to prove priority in the engineering field, and thus to shift to the other the burden of the sin of duplication. The question is as indefinitely debatable as the question of Hamlet's sanity—and the settlement of it just about as important. It has no bearing whatever on present and future policies, which must be determined solely on the basis of the State's advantage.

The doctrine has been assiduously fostered in certain quarters that there is an essential distinction between the engineering training offered by the university and that provided by the Alabama Polytechnic Institute. According to this doctrine the university is the home of professional engineering, whereas the Alabama Polytechnic Institute gives a kind of denatured trade training which masquerades in the garments of engineering education. As far as the committee can discover the only basis of fact for this rumor lies in the past elasticity of the entrance standards of the Alabama Polytechnic Institute. The committee will have something to say about these later. Here it desires merely to note that they seem of recent years to have had little effect upon the quality of the engineering curricula. These are standard in scope. On the other hand, the long list of prominent engineering alumni indicates that the authorities of the Alabama Polytechnic Institute have been unusually successful, in spite of the remoteness of the college from centers of production, in making the work in engineering vital and practical. The Alabama Polytechnic Institute has served the engineering needs of the State with conspicuous success.

The university's past achievements in this line are far less impressive. In spite of large equipment it has graduated an average of less than four engineers a year, and never more than eight. That is a very small output to offset the cost of this division of the university. (See Table 62.) The intimate relationships of the institution with the Birmingham district are made much of by the university officers. Thus far, however, these relationships have not been realized in practice. The committee was amazed that an institution so situated had made so little actual use of its extraordinary advantages. It has done little to develop the modern form of engineering education, which depends upon the establishment of close contacts with the industries, and involves the interplay of school and shop. The university, however, needs engineering as a means of binding its activities to the life of the State. If it grasps this conception and its implications, it can still render important service in this field.

The development of a genuinely effective State program of engineering education comes back finally to the question of support. The amounts appropriated to the Alabama Polytechnic Institute in the last decade are all in payment of services rendered, largely in the agricultural field. Out of them and the small Federal appropriations the institute has had to carry on its whole teaching effort. The State has made no specific appropriations for engineering education, except the small appropriations for buildings. The Alabama Polytechnic Institute is badly handicapped for equipment and has not space enough. It is inconceivable that it can much longer be expected to do creditable work in the engineering field without large additions to its resources. The present budget does not approximately cover its needs. The university, since the large appropriations which were used for an engineering building in 1907, has had no direct grants for engineering education. The engineering college has been supported out of the income from its endowment funds. That this has been sufficient to carry the college thus far is due to the small enrollment. If the State means to put the training for this, its second most important profession, on a firm foundation, it will have to adopt a far more liberal policy toward both institutions than it has ever practiced in the past.

TEACHER TRAINING.

The State of Alabama has 158 high schools for whites, employing approximately 500 teachers. The turnover in the teaching profession is rapid. There are annually about 200 vacancies to be filled in the field of high-school teaching and administration for the white race alone. In no other profession is it possible to determine so accurately the number of practitioners needed. The determination in the case of teaching is reduced to a mathematical certainty, although the committee has been unable to assemble the exact figures. Knowledge of the kind of professional equipment which high-school teachers should have is almost as definite. Courses for the preparation of high-school teachers and administrators are well developed all over the United States. There is general agreement as to the indispensable requirements in the way of preparation and experience which should be demanded of high-school teachers in order to secure a well-served State system of high schools. The fundamental requirements are (1) graduation from a standard college, (2) study in the field of education and psychology in a collegiate institution, (3) experience in actual teaching or in practice teaching, and (4) special familiarity with the subjects to be taught. These represent minimum requirements, which are likely to be advanced as time goes on.

It is probably unnecessary to argue the importance to the State of adequate provision to meet these easily demonstrable needs. Without strong high schools the whole educational system of the State breaks down. Not only are the children who can avail themselves of secondary education defrauded of their right to educational advancement, but a gap is created between the common schools and the higher institutions. The popular method of bridging the gap is for the colleges to move down to the high-school level. When they do so the prospect of genuine professional training is lost. The colleges become hybrid institutions, neither secondary nor higher. Alabama has had experience enough with this condition to realize its seriousness. Its high-school system is largely a product of the last decade and a half. Before its existence the colleges were obliged to maintain preparatory departments, their standards of college training were low, and their graduates were not accepted as of equal rank with those of institutions in other parts of the country. The establishment of high schools throughout the State, the strengthening of their work, and the raising of the majority of the colleges to a collegiate level are largely the result of stimulus applied by the University of Alabama. Through the activities of the university's professors of secondary education and as a result of the university's leadership in the formation of the Association of Alabama Colleges, the high schools have been born and nursed, colleges have been led into paths of academic righteousness, and the foundations have been laid for a State system of secondary and higher education which is in accord with the demands of the times.

But it is necessary to build still further upon these foundations. The mere existence of high schools is not sufficient without properly qualified teachers to serve them. The State must maintain adequate agencies for training high-school teachers. What are the existing agencies? How far do they go toward supplying the annual vacancies in the teaching staffs of the high schools?

The school of education of the University of Alabama, the school of agricultural education of the Alabama Polytechnic Institute, and the Alabama Girls' Technical Institute are the regularly constituted agencies for the training of high-school teachers. In the last academic year the university school of education sent into the teaching profession approximately 30, the school of agricultural education of the Alabama Polytechnic Institute 10, the Alabama Girls' Technical Institute 61, about half of whom entered the field of elementary education. The output of the last year was everywhere affected by the war. The total enrollment in education curricula is therefore more significant of the scope of these institutions as teacher-training agencies. The university enrolled 188, the Alabama Polytechnic Institute 49 in education curricula in 1917–18. The Alabama Girls' Technical Institute reports 116 of the present enrollment as intending to teach. Of these, but 56 expect to enter the high-school field. In addition, a small number of the graduates of private colleges in the State engage in high-school teaching. A liberal estimate of the possible product of all of these sources indicates that the State can count on recruiting from the teacher-training agencies within its borders approximately 80 high-school teachers a year.

The discrepancy between 80 and 200, the number of high-school teachers needed annually, must be met somehow. How? In many other States where there are shortages of home-trained teachers the deficits are largely made good by employing teachers from other States. With rare exceptions this source of supply is practically closed to Alabama. The State pays such low salaries that it can not attract teachers from other communities. Since the schools must run, the remedy which has been perforce adopted is the employment of improperly prepared teachers—graduates of the State normal schools and teachers from the elementary ranks who have had no college training. The schools suffer.

In order to rescue itself from this situation the committee judges that the State must take three steps: (1) It must increase the salaries of high-school teachers. This will be necessary both to induce Alabama students to enter the teaching profession and to supply the State's deficiencies from other sources. (2) It must insist upon adequate professional preparation before it grants even a temporary license to high-school teachers. (3) It must strengthen its training agencies.

The necessity for a general large increase of salaries has already been argued. The State has also already taken the first steps toward the establishment of proper standards for high-school teachers' licenses. It has wisely defined by statute the function of the normal schools as being the preparation of elementary teachers. The blurring of the line of demarcation between the normal schools and the high schools, common in many States, is thus here happily avoided. Through the action of the State high-school commission the State has established college graduation as a prerequisite for the first-grade certificate. Up to the present, however, it has not made due provision for the support of the recognized training agencies for high-school teachers. In the following paragraphs the present scope and future necessities of these agencies are discussed.

The school of education of the University of Alabama.—This division of the university is served by four professors of education. It shares the services of those members of the general university faculty whose departments lie within the range of subjects ordinarily taught by high schools. Only one of the four professors of education is supported wholly by the State. Of the others, one is paid by the General Education Board, one by the income from the Peabody fund, and one in part by the Federal funds for vocational education and in part by the State appropriations required to match these funds. The work of the professor supported by the General Education Board is largely in the field of high-school inspection. It represents a contribution made to the State department of education and the other colleges of the State quite as much as to the university. It relieves the State department of the burden of high-school inspection. But a fraction of this professor's time is devoted to instruction.[1] The employment of a professor from the income of the Peabody fund is a temporary arrangement allowed by the trustees of the fund until such time as the educational building for which the fund was given may be needed. This time is already in sight. The professor of vocational education must devote himself exclusively to the training of teachers in trades and industries. His energies can not be diverted to the general preparation of high-school teachers.

The committee has indicated that one of the indispensable requirements for properly trained high-school teachers is actual teaching experience, or experience in practice teaching. Since possession of the former is largely a matter of accident, it follows that every well-organized institution for the preparation of teachers must have facilities for practice teaching. These may be provided either in a practice school, under the direction of the training institution, or through the services of the students as practice teachers in regular public schools. Institutions located in or near large cities may profitably secure practice-teaching facilities by cooperative arrangement with the public-school authorities. Otherwise the practice school is a necessity. The University of Alabama has no practice-teaching facilities at present. The committee understands that arrangements are on the point of completion which will enable it to use the Tuscaloosa high school for this purpose. The committee doubts, however, whether the privileges of the local public school will in the near future be sufficient for the university's needs.

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[1] For recommendations covering the future administration of high-school inspection, see Chapters IV and XI.

The school of education of the university should be in a position to turn from 100 to 150 graduates into the field of high-school teaching annually, if it is to fulfill its part of the great task of providing the State with the well-trained secondary school staff which it needs. The State should therefore place the school on a more substantial footing without delay. It should make adequate appropriations for a sufficient faculty. It should release the income of the Peabody fund and supplement it to provide a building. It should establish a practice school under the control of the university.

The committee assumes that the preparation of vocational teachers in trades and industries, now partially subsidized by Smith-Hughes funds, will continue to be done at the University of Alabama.

The school of agricultural education of the Alabama Polytechnic Institute.—The effort of the Alabama Polytechnic Institute in the field of teacher-training has of late been limited to the preparation of teachers of agriculture. The work is now in part subsidized by Federal funds for vocational education. The committee commends the wisdom of this limitation. The State has made extensive provision for agricultural instruction in the public schools. In consequence there is a large demand for teachers of agriculture. If the Alabama Polytechnic Institute is enabled to occupy this field fully, it will render its most appropriate contribution in the preparation of teachers. The committee has examined and in general indorses the plans of the school for the development of broader courses in agriculture and country life as preparation for rural leaders. Like the school of education of the university, however, the school of agricultural education needs facilities for practice teaching. The committee judges that in view of the peculiar purposes of the school it is preferable to arrange for these in connection with the work of rural high schools. The beginnings of these contacts have already been made. Such arrangements have entailed considerable supervision and provisions for travel. The State should recognize these needs by suitable appropriations.

The committee is unable to see the necessity or the desirability of a separate inspection of high schools by the Alabama Polytechnic Institute. The existence up to the present year of this enterprise it regards as a sheer waste of time and money. The undertaking also has the added disadvantage of emphasizing the competition between the institute and the university.[1]

Summer schools.—Both the university and the Alabama Polytechnic Institute maintain summer schools primarily for the benefit of teachers. The university receives $5,000 a year for the support of its summer school, the Alabama Polytechnic Institute nothing. The advantages of summer schools as instruments for the professional preparation and advancement of the teaching body have already been discussed. (See Chapter XIX.) It is here sufficient to note that in the summer schools of these two institutions there appears the single inconsistency in the organization of the State's system of teacher training. The summer schools of both the university and the Alabama Polytechnic Institute cater largely to elementary teachers. Almost an even half of the students at the last session of the university summer school were not of college rank. The majority of these were elementary school teachers. A similar situation has prevailed at the Alabama Polytechnic Institute. The committee is elsewhere recommending the strengthening of the summer schools maintained in connection with the normal schools. It judges that when the normal schools are in a position to accommodate the elementary school teachers the university and the Alabama Polytechnic Institute should limit enrollment in their summer schools to teachers above elementary-school grade, and to college students. This is not likely to be possible, however, in the near future.

One of the principal advantages offered by summer schools in other States is the opportunity to hear and come in contact with the leaders in the profession. Universities and State colleges make special efforts to engage as instructors for periods of from one to six weeks the men and women who have achieved a national reputation in their respective fields. Owing to the inadequacy of their support, the Alabama summer schools have been able to follow this practice only to a very slight extent. Unless the grant to the university summer school were at least doubled, and unless the Alabama Polytechnic Institute were supplied with equal resources, the committee can not see how their offerings can be expected to compare favorably with those of the summer schools of other State institutions.

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[1] For the committee's recommendations on high-school inspection, see Chapters IV and XI.

The Alabama Girls' Technical Institute.—The preparation of high-school teachers is a by-product of the work of the Alabama Girls' Technical Institute. As a result of the extraordinarily effective training in home economics offered by this institution, its graduates have been in increasing demand as teachers and supervisors of this subject. Incidentally they have taught other subjects in the school curriculum. The Alabama Girls' Technical Institute does not, however, and in the committee's opinion should not in the future, devote any very large part of its resources to the specific task of training high-school teachers. It has a distinctive function to fulfill in the State's scheme of higher education. What the committee conceives this function to be is discussed later. The committee favors the continued recognition of the institute's graduates in home economics and also in music and commercial branches by the appointing authorities as candidates for high-school positions in this subject.

MEDICINE.

That a State containing approximately 2 per cent of the total population of the United States, a State, moreover, with peculiarly complex problems in the domain of sanitation and public health, needs medical service is axiomatic. Does the obligation rest upon the State to supply its own needs by the maintenance of professional training agencies? A categorical answer to this question can not perhaps be given. But it should be noted that the united effort of the medical profession—probably the best organized of all professions and the one which has devoted most attention to the raising of professional standards—has been toward the development of medical education on national rather than on State lines. The conditions requisite for medical education in the modern sense can not be met everywhere. Modern medical education, especially in the clinical years, can be carried on successfully only in large centers of population. It always demands costly equipment. It is the most expensive type of professional training. While no populous State therefore may neglect provision for an adequate supply of medical service, it is quite possible that its needs may, and should be, met without the maintenance of a four-year medical school. Indeed, if the maintenance of such a school would interfere with the support of other kinds of training that must be furnished by the State, it is clear that the claims of the medical school are of secondary importance. There exist numerous well equipped and generously endowed schools in various parts of the country which are judged to be able to supply the national needs in medical education for some years to come.[1]

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[1] The committee points out that it might be much cheaper for a State to support students of medicine in existing schools outside its borders than to maintain its own medical institution. This is unquestionably the present situation in Alabama. The unit costs at the University of Alabama Medical school bear out this statement.

The problem of medical education in Alabama has been a vexed one for some years. The committee has devoted to its solution a disproportionate part of the time allowed it for the whole investigation. Finally, at the urgent suggestion of persons both inside and outside the University of Alabama, it sought expert medical advice. The committee invited one of the leading authorities on medical education, Lieut. Col. Horace D. Arnold, of the office of the Surgeon General, formerly dean of the graduate school of medicine of Harvard University and former chairman of the Council on Medical Education of the American Medical Association, to render an opinion. The opinion, in which the committee wholly concurs, is submitted herewith:

"The object of the educational survey is to present facts as they are and to advise a sound educational policy adapted to relatively limited financial resources. The consideration of personal feelings or local pride should not weigh in such judgment.

"A short statement in regard to standards in medical education will be pertinent. The Council on Medical Education of the American Medical Association is the recognized standardizing agency and authority for medical schools in America. Schools are classed as A, B, or C. Class A, the highest group, is a broad one, including not only those which closely approach the ideal in medical education, but all those whose graduates, in the opinion of the council, should be admitted to examination for licensure in medicine before the State boards of medicine. A bare inclusion above the lower line of class A can not be regarded as a satisfactory position by any institution that wishes to maintain high educational standards, and should not be satisfactory to any State university.

"Education in medicine is not a necessary part of a State educational system, nor is a medical department an essential part of a university. If a State, through its State university, undertakes to train men to become physicians, its chief object is presumably to furnish well-trained physicians for its citizens. It should not be satisfied with anything less than a broad, thorough training, which will not only enable them to be satisfactory practitioners according to present standards, but will enable them to keep up with the advance in medical science throughout their professional careers, so as to bring the advantages of such advance to the people of the State. Nothing less than the most thorough training to-day will fulfill this requirement.

"It should be the duty of the State to protect its citizens, through the licensure of physicians, from incompetent practitioners. But the protection at present afforded by State examining boards in medicine is in general inadequate—and Alabama is no exception to this general rule. Therefore the success of graduates of a school in passing State boards is not in itself a safe basis on which to estimate the excellence of a school in matters of education. It is but one of a number of points that must be considered. The reports for the year 1918 show that of 13 graduates from the school of medicine of the University of Alabama examined by State boards during the year only one failed to pass, and he was graduated more than five years ago. The importance of this apparently favorable showing is lessened by the fact that 11 of the 12 who passed were examined by the State board of Alabama, and the other in Mississippi. There comes about a natural adjustment in the matter of examinations on the part of a State board and a medical school in the same State, which lessens the value of favorable statistics of graduates of a medical school before the home board of the school. I do not imply any collusion, or improper favoritism, but a favorable standing before the home State board is so common a phenomenon as to be discounted as a test of educational excellence.

"Up to the present time this school has been placed in class A by the Council on Medical Education. While this standing is more creditable than a lower rating, it should not be accepted as evidence of the attainment of a satisfactory educational standard. It should be remembered that the council has graded medical schools with great leniency in an effort to retain and to encourage all those schools which seemed capable of development to reach the desired standard. Educational conditions a few years ago were such as to justify special leniency in judging medical schools in the South, and those schools which were affiliated with universities gave the best promise for advancement and therefore justified liberal consideration. It was only on this basis that the medical school at Mobile was given a rating in class A and was retained in this class. Conditions have now changed. The weaker schools have now been given a sufficient time for development; it is time for the council to reinspect and to reclassify medical schools. The council will not be justified in extending the same leniency as in the former classification, and I believe that it will feel obliged to adopt a standard for class A that would leave out the medical department of the University of Alabama as it stands to-day.

"As a member of the Council on Medical Education, I participated in an inspection of this school January 13, 1914. The report noted that many improvements had recently been made in the institution, but added: "Nevertheless, this is another instance where so much was needed that much still remains to be done. It is to be hoped that the energy which has been shown in the improvements already brought about will not lag until the weaknesses still apparent are offset." The continuance of the school at that time in class A was based rather on this hope than on a cold judgment of the conditions.

My present inspection was on April 21, 1919. While it is true that some improvements have been made in the interval of five years, they have not been sufficient to essentially change the previous situation. In the meantime progressive schools with sufficient means have forged ahead, and it is my opinion that this school holds a relatively weaker position to-day than it did in 1914. Furthermore, the outlook is just so much worse, because the school has been given this opportunity to get in line with present-day requirements and has failed to make good. The council would have no justification now for leniency in judgment on the basis of expected improvement, as was the case five years ago. In making this statement I am making due allowance for the effects of the war as an explanation of present conditions.

" It is not my purpose to make a detailed report of the deficiencies, as would be done in an inspection by the council for the purpose of classification, but rather to treat the subject on broad lines. Why has the school failed to make the progress hoped for five years ago? I think there are two main reasons—lack of sufficient financial support, and the lack on the part of the authorities of the school of a sufficient understanding of what an up-to-date medical school should be.

" The report of the council in 1914 stated:

> Above all, the college needs more money. It should have available $40,000 or $50,000 per year, in addition to students' fees. This is needed for the satisfactory maintenance of the school and should be in addition to any sums expended for added buildings or equipment. The sums mentioned, meanwhile, only refer to what is very essential at the present time. Within the next five or six years it is very probable that to keep up with the progress being made in other institutions a still larger annual income should be provided.

" I believe that this financial estimate at that time was a very conservative one; that it covered only the most essential points that needed improvement; and that it represented the minimum amount on which the school could hope to make anything approaching to satisfactory improvement. One of the chief reasons for the lack of progress lies in the fact that for this period the total receipts from State, county, and city have averaged well under $20,000 annually, and that part of these funds had to be devoted to repairs, development, and equipment not contemplated in the above estimates.

" Physically speaking, the school has housing accommodations that could satisfactorily accommodate 100 students. Its equipment, however, is inadequate for 50 students. Its clinical facilities, if properly developed, would be barely satisfactory for 50 students, and there is no good prospect of satisfactory clinical opportunities for a larger number of students.

" Even more serious, in my opinion, than the lack of financial resources and physical equipment, and the limitation of clinical opportunities, is the lack of appreciation on the part of the school authorities of what modern medical education should be. I say this regretfully—with a full appreciation of the genuine devotion and loyalty of these men to the school and the personal sacrifices made by many in its behalf. Their fundamental conception, however, is too near to that of the old-time medical school—modified to some extent by the published requirements of the council but lacking in the spirit of modern medical teaching, which alone can put life into the physical framework. It is clear that the authorities have tried, with the limited means at command, to meet the advanced requirements as stated on paper.

"This point may be illustrated by the requirement for "all-time" teachers. The authorities have secured some "all-time" teachers, and it is their wish to secure the number required by the council. But an "all-time" teacher is not merely one who does not give his time to other outside work, and the title and an adequate salary do not constitute an "all-time" teacher in the sense meant by the council. To fulfill the function of such a position satisfactorily, he must have equipment, assistants, and financial provision that will enable him, in addition to his teaching, to carry on research, investigation, and self-improvement that will keep him abreast of his branch of medical science, and be an inspiration to himself and to his students. One of the disheartening things about this school is the absence of evidence of such activity—partly, to be sure, because of limited means, put partly, I think, due to the lack of appreciation of how essential such work is in modern medical education.

"I have stated that the clinical facilities might be considered adequate for the present number of students if properly utilized. By this I mean that there is a sufficient number of beds for this purpose in the city hospital, if they are ordinarily well filled with a variety of cases. But the system of records and the study of cases are not satisfactory for a modern teaching hospital. I do not mean that the hospital care and professional treatment of patients may not be as good as in the average hospital of this kind, but the proper training of medical students requires much more careful study of cases than that. The absence of up-to-date methods in this respect at the hospital, yet the great satisfaction felt by the school authorities with the existing clinical opportunities, again illustrates what I mean by their lack of appreciation of the needs of modern medical education. The same thing is shown in the entirely inadequate estimates made in the proposed budget for the maintenance of the school laboratories and for the teaching at the hospital.

"The deficiencies of the school will not be remedied merely by making larger appropriations. It is my opinion that the amount of money necessary to develop a first-class medical school at Mobile is far greater than has been estimated; that the expenditure of that amount for this purpose is not justified in the present, or immediately expected, financial position of the State of Alabama; and that the attempt to build up this school to a satisfactory position should be abandoned.

"Under the circumstances it would seem wiser for the University of Alabama to abandon the attempt to conduct a four-year medical school, and to confine its efforts in undergraduate medical education for the present to the development of a really first-class medical school which gives the training of the first two years of the medical course. Such a plan has already been adopted in a number of States, as the best contribution that the State university can make under present conditions for medical education. A notable example of the successful development of this plan is the medical department of the University of Wisconsin. This plan could be satisfactorily carried out at the university at Tuscaloosa, and there are obvious advantages in undertaking this work there instead of at Mobile.

"If now or later the State of Alabama can devote additional funds beyond the needs of such a medical school for the medical benefit of its citizens, the medical plant at Mobile might well be utilized for the instruction and further training of the physicians of the State. The demonstration of the need of such postgraduate training for the average physician in practice is one of the lessons of the war, and may well receive serious consideration by the authorities of the State.

"My study of the conditions of medical education in Alabama included also an examination of the situation at Birmingham. This at present much larger center of population, with its manufacturing industries, its present hospital and medical school buildings, and the opportunities for further development, offers attractive possibilities. However, the outlay for the development of a satisfactory medical school at Birmingham is greater than the university or the State should at present undertake. The university is wise in retaining its control of the situation through its plan for postgraduate teaching, and this may well be developed through financial support from the State, as suggested above for the utilization of the medical plant at Mobile. There are obvious advantages in having two such centers in the State for the convenience of the medical profession, and the outlay for the establishment of useful courses of instruction for practitioners is relatively small—far less than that necessary for the systematic instruction of undergraduates.

"In my opinion the wisest plan for medical training by the State of Alabama would be the abandonment of undergraduate medical teaching at Mobile; the establishment of a two-year medical school at the State University at Tuscaloosa; the continuance of postgraduate medical teaching at Birmingham; and the establishment of a similar center for postgraduate medical teaching at Mobile. Both of these postgraduate centers should be under full control of the University of Alabama. Later—probably some years later—if the finances of the State or of the university warrant it, the reestablishment of a four-year course in medicine may be considered. The clinical opportunities at Tuscaloosa would be insufficient for this purpose, and the new school would naturally be located either at Mobile or at Birmingham. The choice of location may well be left to be decided later. The choice should take into account the size of these centers of population as they then exist, the hospital and other clinical opportunities that are developed, and the success in teaching shown in the meantime at each of the two centers for postgraduate teaching.

"So far I have considered this matter solely from the educational point of view. There is, however, a serious legal difficulty, which will prevent the immediate adoption of this plan unless the statutes are changed. On February 15, 1915, an act was approved to amend section 1889 of the code of Alabama as follows:

> *Be it enacted by the legislature of Alabama:*
>
> SECTION 1. That section 1889 of the code be amended so as to read as follows:
>
> "SEC. 1889. Medical department of the University of Alabama: The corporation styled the Medical College of Alabama is dissolved, and the institution heretofore known as the Medical College of Alabama is constituted the medical department of the University of Alabama, and shall hereafter be under the sole management, ownership, and control of the board of trustees of the University of Alabama, provided that the said medical department shall remain at Mobile so long as it can be maintained in that city as a class A school of medicine as defined by the Council on Medical Education of the American Medical Association. Whenever the Council on Medical Education of the American Medical Association informs the trustees of the university that it proposes to lower the classification of said medical department, said trustees shall order the removal of the said medical department to Tuscaloosa or elsewhere that may offer the best advantages and inducements, to be conducted in such manner as the trustees of the University of Alabama may elect, provided that the courses offered shall conform to recognized standards. All appropriations of moneys which have heretofore been made to said college (or department) or which may hereafter be made in aid of said medical department of the University of Alabama shall be paid to the trustees of the University of Alabama, to be used in such manner as they may from time to time direct."
>
> SEC. 2. That all laws and parts of laws in conflict with the provisions of this act be and the same hereby are repealed.

"It would appear from this act that the University of Alabama is bound to maintain its medical department at Mobile "so long as it can be maintained in that city as a class A school of medicine as defined by the Council on Medical Education of the American Medical Association," and that it can not forthwith abandon the medical school at Mobile even if it wished to do so. Under these conditions I would recommend that the legislature make as liberal an appropriation as it can for medical education; that the university expend this money this year chiefly in strengthening the first two years of the medical school at Mobile, by securing a sufficient number of competent "all-time" teachers, increasing the equipment of the laboratories, and making provision for research in the laboratory subjects; and that it request the Council on Medical Education of the American Medical Association to make an inspection of the school in the fall, as early as practicable after the session opens, and to report to the trustees of the university its decision as to the classification of the school. If the school is then rated in class A, the university would be justified educationally—as well as compelled legally—to continue the development of the medical school at Mobile.

"Incidentally it would in that case be shown that my estimate and forecast of the situation was too low. Perhaps it is wise that the school should thus be given the benefit of any doubt in this matter. If the school should fail to receive a rating in class A, then the plan suggested above could be carried out. In that case there would have been very little waste of money, since it would have been spent chiefly for equipment and personnel which could be transported to Tuscaloosa. The determination of the classification of the school early in the fall would enable the university to complete plans for the transfer of the two lower classes to Tuscaloosa at the beginning of the second semester, if the school failed to maintain its standing in class A.

"A few other details should receive consideration. Students entering the school this fall should be informed of the possibility of the change to a two-year basis, and the university should not obligate itself to furnish these students more than two years of medical instruction. A legal opinion should be obtained as to the obligation of the university to complete the four-year course in the case of the students who are already enrolled in the school. The plans for continuing clinical undergraduate teaching at Mobile after the next school year would depend upon this decision. The university should at least continue through the next school year at Mobile the clinical teaching for students of the two upper classes.

"It may be well to make it clear that I am making this report merely as an authority on medical education, and entirely independently from the Council on Medical Education of the American Medical Association. I resigned from the council last fall, because of my duties in military service, in directing matters relating to medical education at the Surgeon General's Office. It follows that I shall have no voice in the decision of the council as to the next classification of this medical school, and the Council on Medical Education may be relied upon to make its decision as to the rating of the school in a fair and unprejudiced manner. The council also is bound in no way by my recommendations, as I have come to my conclusions without consultation with the council."

PHARMACY.

If the committee's recommendations made in the preceding section are adopted, it is understood that the course in pharmacy maintained in connection with the medical school at Mobile will be abandoned. There is duplication in the field of pharmaceutical education which the committee judges to be unnecessary. Although apparently no effort has been made by either the university or the Alabama Polytechnic Institute to ascertain definitely the number of trained pharmacists needed in the State, the combined enrollments in pharmacy at the two institutions do not now and never have amounted to more than can easily be accommodated in a single department. The present enrollment at the medical school is 6, at the Alabama Polytechnic Institute 44.

There are obvious reasons why instruction in pharmacy may well be associated with instruction in medicine. The desirability of this association is the only justification for the maintenance of pharmacy as an offshoot of the university's effort in medical education. On the other hand, the basic sources in medical science with which the work in pharmacy is primarily related are given in connection with veterinary medicine at the Alabama Polytechnic Institute. Moreover, the department of pharmacy at the institute is much stronger than that at the medical school. It is a member of the American Conference of Pharmaceutical Faculties. It offers the three recognized curricula in pharmacy, namely, the two-year curriculum open to two-year high-school students and leading to the degree of Ph. G., a three-year curriculum leading to the degree of Ph. C., and a four-year curriculum leading to the degree of B. S. in pharmacy, admission to the last two curricula being based on 14 high-school units. The university, on the other hand, offers but a single subcollegiate two-year curriculum leading to the degree of Ph. G. All of these facts reenforce the committee's decision that the State's effort in pharmaceutical education should in the immediate future be centered at the Alabama Polytechnic Institute.

VETERINARY MEDICINE.

The need for a much larger number of trained veterinarians in the United States was demonstrated clearly during the World War. For a time those concerned with the national aspects of the care and production of live stock were alarmed by the dangers latent in the shortage of veterinary service. Facilities for education in veterinary medicine, like those for education in human medicine, have developed independently of State lines. The field of veterinary medicine, however, is less well supplied. Indeed, the science of veterinary medicine is just beginning to receive due recognition. The Department of Agriculture has recently attempted to further this movement by defining, in cooperation with veterinary colleges, standards of education in veterinary medicine and by preparing a list of accredited veterinary colleges. The college of veterinary medicine of the Alabama Polytechnic Institute is listed by the department in class A. The committee is of the opinion that the continuance of this division of the institute, with such increases and support as are necessary, is a self-evident obligation for the State. (The most immediate necessity is in the direction of physical equipment.) Not only does the college of veterinary medicine serve one of the State's own major interests, but it exercises a general leadership in this field throughout a large part of the South.

LAW.

The practice of the law has always made a potent appeal to brilliant young men throughout the South and indeed throughout the Nation. The profession has been perhaps especially popular in Alabama. It offers attractive opportunities for a dignified career and for large influence in public life. Indeed, there is probably no other profession in which the rewards for talent and enterprise are so conspicuous under the present form of social organization. The law will probably continue to attract a considerable percentage of young men of ambition and initiative. The profession touches the corporate life of the State more closely than any other. Lawyers constitute a dominant proportion of the State's governing bodies and of its various administrative boards. Whether this should be the case or not, the fact remains. There is no indication that it will be altered in the near future. It is of supreme interest to the State that its laws should be well made and wisely interpreted and administered. The quality of the legal profession is therefore a matter of intimate concern to the State as a corporate entity and to every one of its citizens. The State can determine what the quality of the profession shall be. By its requirements for admission to the bar and by the agencies for legal education that it supports, it has complete control of the professional supply.

The committee is informed—although it has had no opportunities to verify the information—that the State bar requirements are not rigid enough to exclude from practice men with insufficient training, and that consequently the State is overstocked with lawyers of inferior education. If these statements are correct, there was in the past a certain measure of justification for the conditions they reveal. In the days of political and industrial individualism it was important that there should be many starters in the race for professional leadership. The strain of competition inevitably eliminated the weaklings and the unfit. The State as a regulatory and directive agency entered relatively little into the life of the average citizen. Whether for weal or woe, that time has now gone. A new type of social organization has developed. Every year sees an enlargement of the State's participation in the business, the education, the health, and the conduct of its citizens. The primary instruments of its participation are its laws. The provision that the State makes for the forging and wielding of these instruments is a public interest second to none other.

The State maintains a law school at the University of Alabama. It would be more correct to say, "allows to exist," rather than maintains. The law school maintains itself. It lives off its fees. Its present condition is not one in which the State can take pride, although it can not escape responsibility. There are law schools connected with 35 State universities. Thirty-one of these require three years of study for the LL. B. degree. The university law schools of North Carolina, South Carolina, Mississippi, and Alabama require but two years. Graduates of the Alabama law school, however, are admitted without examination to the Alabama bar. Standardization of law schools has not proceeded very far, but a beginning has been made by the Association of American Law Schools. This association recognizes only those schools requiring three years of instruction for graduation and having a law library of at least 5,000 volumes. These are minimum and admittedly temporary requirements. They by no means represent what are commonly regarded as the desirable prerequisites for institutions that give training in so influential a profession. Indeed, several law schools admit only college graduates; others require at least one year of collegiate study for entrance. The University of Alabama law school does not meet either of the two minimum requirements of the Association of American Law Schools.

There is no excuse for the State to continue as a part of its State university a nonstandard law school. Nothing could be more prejudicial to the reputation of the institution throughout the country. Nothing will more certainly drive away from the State the young men of energy and promise who seek a legal education. In the end nothing will react more unfavorably on the quality of the service which the State receives from the members of its legal profession. The committee does not imply that the officers and teachers of the university law school are in any sense to blame for the present condition of the school. They have, in fact, constantly advocated its elevation to standard rank. Within the limitation imposed by meager equipment and lack of financial support, they have succeeded in rendering valuable service to the State.

The committee recommends that the university law school immediately be placed upon a standard basis. This entails the provision of funds for the increase and maintenance of the library and for additional instructors. The $7,500 a year asked for by the university for these purposes is evidently not nearly sufficient.

COMMERCE AND BUSINESS ADMINISTRATION.

The increasing urbanization of the population means a relative increase in business and commercial organization. This has already become highly complicated in cities such as Birmingham and Mobile. It is a thing of numerous potential ramifications. Alabama is also one of the gateways of foreign trade. To relate the industries of the State to foreign markets, to exploit these, and to stimulate the growth of the State's commercial enterprise with a view to meeting the conditions of these markets, are projects vital to the State's material progress. Modern business administration rests on the application of science to business problems. The best school for acquiring knowledge of it is no longer the school of experience. Business administration is a university subject. The more progressive universities have recognized this fact and have provided special professional schools to give training in the sciences which underlie commerce and business. As yet the higher institutions of Alabama have been able to do nothing in this direction. The committee is convinced that a State which includes 2 per cent of the total population of the United States, a State which possesses the great commercial prospects which have been indicated, can no longer afford to neglect this field of professional training.

Obviously the appropriate place for its development is at the University of Alabama. The ultimate extent of the undertaking can not be determined without preliminary investigation. Such investigation it will be the province of the State council of education to make. On the basis of its findings the program of the university can be modified from time to time. A modest and safe beginning can be made, however, even in advance of the council's inquiries. The committee judges that the budgetary requests of the university for the establishment of work in commerce should receive favorable action.

FORESTRY.

Even the casual traveler through the State can scarcely fail to be impressed with the value of Alabama's forests to the public welfare. According to an estimate of the United States Forest Service, Alabama is exceeded only by 10 States with respect to the quantity and value of its standing timber. The amount is estimated at 50 billion feet. The present value of this standing timber, figuring on the conservative basis of $4 per thousand, is $200,000,000. The Bureau of Crop Estimates of the United States Department of Agriculture places the 1918 production of firewood at 5,158,000 cords, with a total value of $13,927,000. The United States census report for 1919 places Alabama third among the States in the quantity and value of its turpentine and rosin products. The production of these commodities in 1909 was valued at $2,471,999. From these figures it is apparent that Alabama's forests represent one of its chief resources.

In view of the economic importance of Alabama's forests it is remarkable that the State has no educational program to insure their proper development and conservation and a wise utilization of their products. An industry which means so much to the State deserves attention in the State's educational scheme. Not only is it necessary to familiarize the public with the value of forests and with the principles governing their conservation and utilization, but provision should be made for investigation and for the training of forestry specialists to insure proper development of the forestry industry and the industries relating to forestry.

Except for a two-hour course in farm forestry extending through 12 weeks, offered by the Polytechnic Institute, the higher institutions are doing nothing to meet the needs in forestry training. On account of its close relationship with agriculture, the work logically is a function of the Polytechnic Institute. The State should provide money for this purpose. The amount should be sufficient at first to establish a strong department with at least two full-time instructors. and later, as experience dictates, to establish a separate division coordinate with the other divisions of the institute.

TECHNICAL INSTRUCTION OF WOMEN.

The previous discussion of the professional needs of Alabama and the relation of the existing training agencies to them has involved no special reference to sex. In several of the callings and professions mentioned, particularly teaching, women as well as men engage. In less degree, but increasingly, it is true of medicine, pharmacy, and law. There are other activities, however, of which a State educational system must take account that are almost exclusively the sphere of women. The chief of these are home economics, commercial and secretarial service, music, and art.

At present practically all of the training offered by the State in these lines is centered at the Alabama Girls' Technical Institute.[1]

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[1] Certain service courses in home economics are also given at the University of Alabama.

In this institute the State possesses a school which bears a certain generic resemblance to other schools of similar designation in other States, but which by reason of its wise leadership and of the character of the clientele which it serves is almost unique. The general purpose of the school is a double one, namely, to instruct young women in the arts and sciences that underlie home making, and to give training in the various arts and industries whereby women make a living. It has been unusually successful in accomplishing both ends. Its success has been largely due to empirical methods. Instead of establishing a series of traditional curricula and fitting the student to these in procrustean fashion, it has studied the field which it was designed to serve and has adapted its instruction to the practical duties that its graduates would be called upon to perform. The technical work, however, is based upon a solid substratum of liberal training.

The institute now gives courses of study in home economics, commercial practice, music, and art. Naturally a considerable percentage of its graduates have gone into teaching, because teaching offers the most immediate chance to become self-supporting, and there is a large demand for teachers of the special subjects in which the institute gives training. But the majority of the graduates of the school have become home makers. That this is the case is, in the committee's opinion, the most conclusive testimony of the completeness with which the school has fulfilled its functions.

In the past few years the Alabama Girls' Technical Institute has been subjected to influences which threaten to subvert its distinctive character and to jeopardize its future. The influences arise from two sources. The first is the State requirement of college graduation for the first-grade certificate; the second is the large Federal grant for the development of home economics. Since 1917 the training of teachers in home economics provided for by the Smith-Hughes funds has been centered at the Girls' Technical Institute. This disposition of the federally supported work in home economics has been made because the Alabama Polytechnic Institute has not developed a department of home economics. Undoubtedly it was a reasonable arrangement, in view of existing conditions. It has had two consequences, however, which are unfortunate: It has emphasized, on the one hand, what may be characterized as the normal school aspect of the Alabama Girls' Technical Institute. On the other, it has exerted pressure on the institute tending to change it into a four-year college. The continuance of the work supported by the Smith-Hughes funds is indeed dependent upon the conversion of the institute into a standard college. The pressure exerted by the Smith-

Hughes requirements is reinforced by the State requirement mentioned above.

Now the committee regards both of these tendencies as undesirable, not only from an institutional, but also from a State point of view. The training of teachers ought to be a secondary and incidental function of the institute. It can not be wholly neglected. But if the recommendations for the development of the normal schools are accepted, there will be no need of creating a specialized normal school at Montevallo. The conversion of the institute into a standard college would be a genuine calamity. It can not be accomplished without submerging the valuable and effective work by which the institute has won distinction. Moreover, it would inevitably introduce a new element of competition into a State system of higher education already sufficiently complicated by competitive difficulties.

The solution which the committee proposes is the most radical of its recommendations bearing on higher education. It advises the establishment of a well-equipped division of home economics at the Alabama Polytechnic Institute and the transfer to that institution of all the Smith-Lever extension work in home economics and the Smith-Hughes work in the training of home economics teachers. A necessary corollary is the provision of dormitories or adequately supervised residence houses for women at Auburn. In effect, then, the Alabama Polytechnic Institute would become what the land-grant colleges of most other States already are, the professional college for women in the sciences relating to agriculture and home making. This provision, if adopted, would entail the expansion of the work of the School of Agricultural Education of the Alabama Polytechnic Institute to cover the training of teachers in home economics. It would also reinforce the program of that school for the training of rural life leaders of both sexes.

Until this development is consummated the Alabama Girls' Technical Institute will of course remain the State's principal agency for training teachers of home economics. It should continue its three-year curriculum for that purpose. The committee has already recommended the recognition for high-school teaching positions of its graduates in this subject.

The effect of the proposed action on the Alabama Girls' Technical Institute would be to free it for the work which it alone of existing State institutions is qualified to perform. Until the population of Alabama undergoes essential changes, there will be large need, both quantitative and qualitative, for the kind of training which the Alabama Girls' Technical Institute has given with such conspicuous success. In the committee's opinion this represents a higher mission than joining the already numerous company of four-year colleges.

On the ground of present expense to the State there is little to choose between the two courses indicated. The establishment of a women's division at Auburn would hardly cost more than the thoroughgoing reorganization necessary to convert the Alabama Girls' Technical Institute into a college. The faculty of the institute is not a collegiate faculty in point of training, nor is it large enough in numbers to offer the kind of college education for which the State would be willing to stand sponsor. (See Ch. XXI.) The scientific equipment of the institute would also have to be very greatly increased in the event of the changing of the school to collegiate status.

LIBERAL ARTS AND SCIENCES.

The extent of the facilities which a State needs for education in the arts and sciences is probably more difficult to estimate than the necessary provisions for training in any professional or technical occupation. From the point of view of the ideal a State needs sufficient facilities of this character to provide a liberal education to everyone who is mentally capable of profiting thereby. Economic limitations begin to operate, however, long before the zone of mental limitations is reached. Practically, therefore, the extent of a State's needs in facilities for liberal education is determined by the number who can make use of them. Most States are oversupplied with colleges of liberal arts, viewing the matter from a purely practical standpoint; i. e., most States have within their borders more colleges than can be adequately supported or properly filled with students. States have generally accepted the obligation to furnish in publicly supported institutions liberal education to all those who care to resort to such institutions, regardless of the existence of private or denominational colleges. Assuming this policy to be sound, the question to be asked in any investigation of State provisions for higher education is: Are the facilities for higher liberal education adequate in scope and in quality to meet the demands of the young people who seek general training under State auspices?

The State now maintains one full-fledged college of arts and sciences, namely the college of arts and sciences of the University of Alabama. In addition, three years of general liberal education are offered by the Alabama Girls' Technical Institute, and the Alabama Polytechnic Institute offers a so-called general course which is substantially the equivalent of a liberal curriculum, with a strong scientific emphasis. The enrollment in the college of arts and sciences of the University of Alabama was for the last academic year 568, or almost an even two-thirds of the total enrollment of the university. The enrollment in liberal arts at the Alabama Girls' Technical Institute was insignificant. The enrollment in the general course at the Alabama Polytechnic Institute was 86.

of a research program has been made is the field of agriculture. Research in agriculture, as has been stated, is supported largely by Federal funds. Outside of this the State has made no provision for research at either of its two principal higher institutions.

Ordinarily the amount and quality of research done at a State institution is in almost direct proportion to the presence on the faculty of men of scientific training who are true to their scholarly obligations. The scantiness of research work done by members of the faculties of the university and the Alabama Polytechnic Institute, does not, however, indicate that the scholarly equipment of these staffs is low. The faculty of the university includes, indeed, an unusually high percentage of men of advanced academic training. That of the Alabama Polytechnic Institute compares favorably in point of scientific training with the faculties of other institutions of its type. The failure of both these groups to be normally productive is due primarily to the fact that they are overloaded with other duties.[1]

It is undoubtedly appropriate that in a State where so much that is fundamental to the creation of a system of higher education remains to be done the research projects undertaken in the near future should be intensely practical. A large proportion of them should relate themselves directly to the present industrial problems of the State. The immediate industrial benefit of such research projects as have already been undertaken in the field of agriculture should be sufficient earnest of the material return that may be expected. However, a State university or a State system is hardly worthy the name unless it stands for the promotion of scientific inquiry. There is a large class of investigations totally unrelated to material advantages the results of which have in intangible ways enriched human living and contributed to the progress of civilization. The prosecution of these must depend largely on college and university scholars.

Research is a costly enterprise. Especially in the sciences, expensive equipment is often needed. Always there is involved the release of certain highly trained individuals from other duties. These facts must be faced. But the obligation resting on the higher educational system to promote research can not be avoided. It is part of the burden which the State accepts when it undertakes to subsidize colleges. The committee recommends therefore the development of definite programs of research by both the university and the Alabama Polytechnic Institute, and the inclusion of estimates to cover these programs in their budgets.

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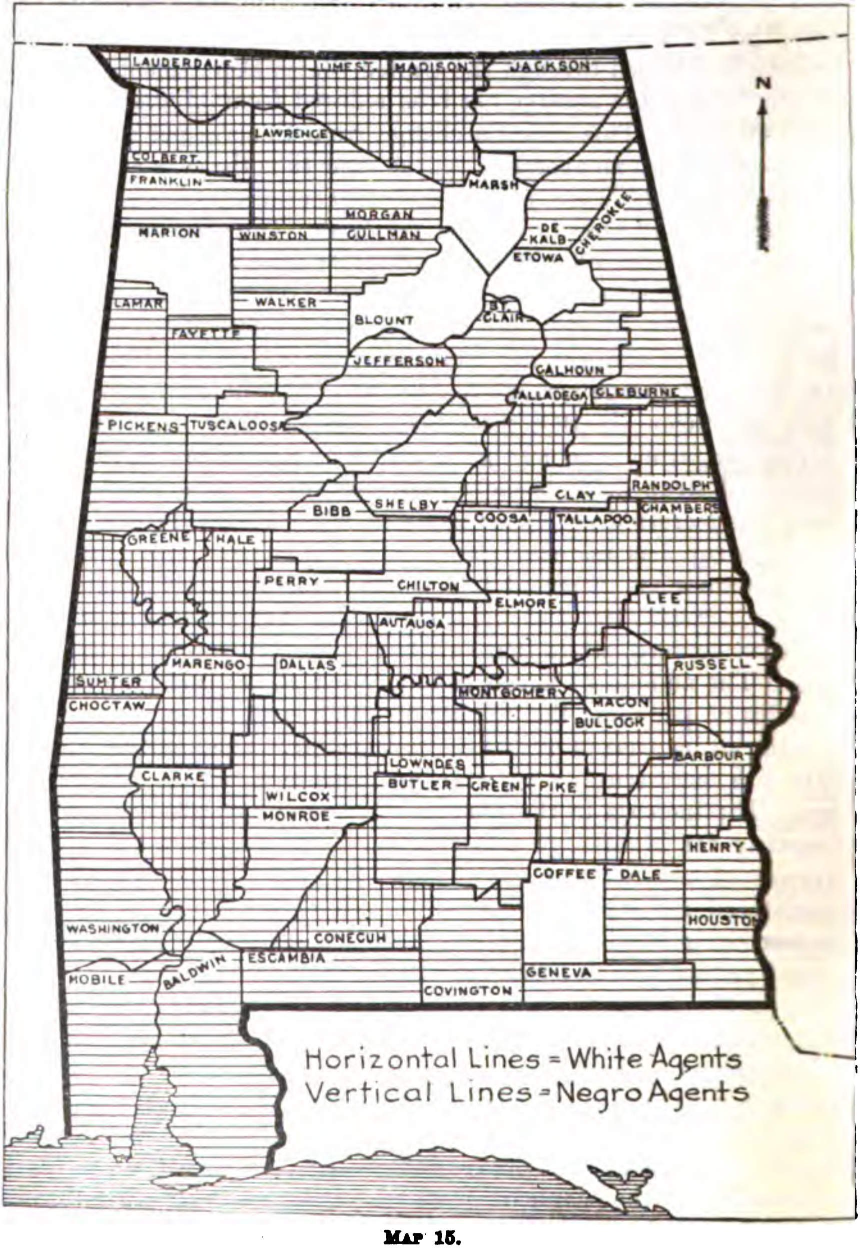
[1] There are, of course, a few members of both staffs who have made noteworthy contributions in the field of research. It is the aggregate record of the faculties that is here under discussion.

EXTENSION.

Great changes have taken place in agriculture in Alabama during the past decade and a large share of the credit for this phenomenal development undoubtedly belongs to the extension service of the Alabama Polytechnic Institute. During this period, as a result of the campaign for a more diversified system of farming, according to information obtained through the United States Department of Agriculture, "the cotton acreage has been reduced from 3,730,482 acres to 2,500,000 acres. This means a change from 18 acres per farm to 10 acres per farm on an average. At the same time the corn acreage has increased from 2,572,968 acres to 4,636,000 acres, which is an increase from less than 10 acres to 18 acres per farm. The acreage in peanuts has increased from 100,609 acres to 747,000 acres and the production from 1,573,796 bushels to 17,470,000 bushels. Velvet beans were practically unknown in 1909 and the present acreage is 927,000 acres. The acreage in cowpeas has increased from 85,000 to 537,000. The total hay and forage acreage in 1909 was 238,656 acres, or less than 1 acre per farm. In 1908 the acreage was 1,596,000, or a trifle over 6 acres per farm. The acreage in sugar cane has doubled, while the amount of sirup made is more than doubled. The acreage in sorghum has increased nearly seven times, while the production in gallons of sirup has increased more than ten times. The acreage in Irish potatoes has increased four times, while the sweet-potato acreage has increased two and one-third times. The acreage in oats has not quite doubled, while that in wheat has increased more than ten times. The number of horses has increased 14 per cent; the number of mules 23 per cent; the number of milch cows 26 per cent, which includes an increase of 40,000 in the last year. The number of other cattle has increased 57.6 per cent, an increase of almost 100,000 last year. The increase in the number of hogs is 75.5 per cent, which, excepting for Mississippi and Florida, is the largest percentage of increase of any State in the Union. In 1909 the number of hogs slaughtered and sold was 704,700, valued at $7,747,000; in 1918 the number slaughtered and sold was 1,405,800, valued at $33,735,000."

And yet the field is barely scratched. The acreage devoted to the crops mentioned above represents only an insignificant part of the total tillable land of the State. The possibilities for development are enormous. These relate not only to the matter of agricultural production, but the whole field of country life abounds with opportunities for service. Much effort is still needed to change public opinion toward farming as an occupation and to place it on a higher level in the minds of the people of Alabama. Progress in this direction is dependent to a large extent upon making farming profitable for the farmers who live on small acres and who depend mainly upon their own labor and that of their families. To make such efforts profitable



ALABAMA EXTENSION SERVICE
Map showing FARM DEMONSTRATION AGENTS in ALABAMA
APRIL 1919

Horizontal Lines = White Agents
Vertical Lines = Negro Agents

MAP 15.

necessitates localization of certain agricultural interests and the development of cooperative methods.

The support of the agricultural extension program in Alabama has been fairly liberal in comparison with other Southern States, but the conspicuous weakness of the undertaking is found in the fact that the salaries offered are not sufficient to attract the best talent. The following statement shows the maximum, minimum, and average salaries paid to county agents and home demonstration agents in the Southern States as for December, 1917:

TABLE 63.—*County agricultural agents.*

States.	Average salary.	Highest salary.	Lowest salary.
Alabama	$1,512.88	$2,002.00	$650.00
Arkansas	1,635.23	2,449.92	700.00
Florida	1,534.28	2,400.00	900.00
Georgia	1,595.08	2,250.00	1,000.00
Kentucky	1,629.87	2,600.00	1,020.00
Louisiana	1,462.22	2,712.00	1,200.00
Maryland	1,940.95	2,400.00	1,704.00
Mississippi	1,853.33	3,000.00	900.00
North Carolina	1,485.14	1,860.00	540.00
Oklahoma	1,668.23	2,040.00	1,340.00
South Carolina	1,599.35	2,800.00	1,000.00
Tennessee	1,462.35	2,100.00	1,020.00
Texas	1,739.91	4,000.00	1,200.00
Virginia	1,405.56	2,000.00	391.01
West Virginia	1,731.72	2,299.92	949.92
Average	1,620.54	....	....

TABLE 64.—*County home demonstration agents.*

States.	Average salary.	Highest salary.	Lowest Salary.
Alabama	$858.24	$1,200.00	$495.00
Arkansas	949.50	1,560.00	600.00
Florida	1,142.73	1,801.00	600.00
Georgia	939.90	1,200.00	490.00
Kentucky	856.23	1,500.00	500.00
Louisiana	1,145.56	1,320.00	900.00
Maryland	1,050.61	1,500.00	800.00
Mississippi	1,020.42	1,740.00	500.00
North Carolina	868.09	1,370.40	280.00
Oklahoma	1,065.79	1,260.00	960.00
South Carolina	989.18	1,126.36	825.00
Tennessee	907.21	1,792.00	450.00
Texas	952.84	1,752.00	825.00
Virginia	796.96	1,100.00	360.00
West Virginia	729.20	1,200.00	115.00
Average	943.40	....	....

There are many well recognized defects in the social life of the farming people. This is true throughout the whole country, but it is especially true in the Southern States. Uncomfortable living conditions and the lack of social opportunities drive many people from the country to the town. The allurements of the city may be greatly diminished by reducing the contrast between the living conditions of the city and those of the country. The nature of the extension service requires, and the prospective result is sufficient to attract, the best talent available—men and women with vision, ability, and enthusiasm.

From these figures it may be seen that Alabama is neither among the lowest nor the highest States in the matter of salaries paid to agricultural and home demonstration agents. It is apparent, however, that the salaries paid are not high enough in view of the quality of service demanded. The State should recognize the magnitude and the possibilities of the undertaking and be prepared to support it accordingly. It should assume an ever-increasing proportion of the responsibility for its financial support. The State can not afford to neglect the support of a program which means so much to its economic prosperity and to the social welfare of all its citizens.

Aside from financial support, the extension program needs careful organization and administration. As suggested in Chapter XXI, the program is large enough to demand the undivided attention of the director of the division. The necessity for assigning the full time of an administrative officer to the extension service will be the more imperative if the scope of the work is extended to include all lines of effort represented within the scope of the institution, including the various phases of engineering which will comprehend activities connected with the social conditions of industrial workers. The undesirability of the present arrangement is reflected in a general feeling of unrest among extension workers. There is a feeling also that while very effective work is being done in several lines, the program as a whole is not well coordinated. The workers in one department are unfamiliar with the work of other departments. They express the desire for more frequent general and individual conferences with the director.

UNIVERSITY EXTENSION.

There is a great need in the State of Alabama for the general university extension service contemplated by the University of Alabama. The amount of money recommended in its budget is insufficient to do very much. However, it may be all that the University can hope to secure at this time, and it is better to make a beginning so as to demonstrate sufficiently to the people of Alabama the value of extension work possible through their university. In time the extension division at the university should have a large number of practical courses in engineering and commercial subjects, as important to the industrial life of the State of Alabama as agricultural extension is to the agricultural interests of the State. It is equally important that the extension work of the University of Alabama contribute information and training in the cultural subjects and social sciences.

HIGHER EDUCATION OF NEGROES.

The touchstone of the State's needs should be applied to the problem of the higher education of negroes. The application of it would, in the committee's opinion, reveal certain striking facts. It would show first of all that there is within the confines of the State a segregated social group numbering 1,023,231. Its members live a life in many ways distinct from that of the whites. They have practically no part in public affairs. The point of contact is chiefly in the domain of labor and business, using these words in their broadest sense. Even in these domains the contacts are limited. Under these limitations the colored group commands only to a very slight extent the professional services of the specially trained whites. The State of Alabama is therefore in a sense two States, the geographical boundaries of which coincide. There is the white State of Alabama, a community of 1,356,374 inhabitants, and the colored State of Alabama, with a population of 1,023,231.

Attempt has been made to summarize the higher educational needs of the first of these. What of the other? The committee assumes that the colored population is in tutelage. To promote its development the State maintains inadequate elementary schools and makes very limited provision for normal training. Under the influence of these the general level of intelligence of the colored race is being gradually raised. There is evolving a vast community (a community larger, for example, than the State of Oregon, the State of South Dakota, the State of Minnesota), with fundamental interests not essentially dissimilar from those of the white community. It is self-evident that such a community needs enlightened leadership. By reason of its segregation from the white community, this leadership must come from within the colored race itself. Elementary considerations of public interest demand that provision be made to train competent colored leaders.

What are the present provisions for the training of colored leaders? Aside from the limited provision for normal training the State assumes a partial responsibility for the Agricultural and Mechanical College for Negroes. A large portion of the work of this institution—indeed all of it that is above secondary grade—is also in the field of teacher-training. At the present time the State maintains no agency in which qualified members of the colored race can secure collegiate training in agriculture, in the mechanic arts, or in liberal arts.

The most thoughtful and sympathetic students of Negro education agree that the best interests of the race demand the development first of all of facilities for training in productive activity. Not until a majority of the race is economically efficient is it desirable to encourage the establishment of many institutions devoted to higher liberal training. For a State which supports neither technical colleges nor liberal colleges for Negroes obviously the provision for technical education should be made first.

Now the State of Alabama is under an obligation more compelling even than that of self-interest to provide for the higher technical training of its colored citizens. It is under a moral obligation. It has accepted the Federal funds for the support of the land-grant colleges, and in so doing has pledged itself to carry out the purpose for which these funds are granted. It has divided the funds, as is the custom of the Southern States, and has assigned that portion of the Agricultural and Mechanical College for Negroes to which the college is entitled on the ground of the ratio of colored to white in the total population. But it has not carried out the implied terms of the contract. The State's treatment of its Agricultural and Mechanical College for whites has been parsimonious enough; nevertheless, it has enabled that institution to meet the Federal requirements. The Agricultural and Mechanical College for Negroes has received but $4,000 a year from the State since 1885. No special appropriations have been made to it. There has been no increase in the regular appropriation to meet the growth in enrollment and the advancing cost of maintenance. There have been two results highly discreditable to the State, results for which the officers of the institution are in no wise to blame: The college has been obliged to violate the regulations governing the expenditure of the Morrill funds, and it has run into debt. The Bureau of Education has treated the violations of its regulations with the utmost leniency, realizing the insuperable difficulties which the institution has had to face and believing that the continuance of the college was more important than exact conformity to the general requirements. The time is at hand, however, when the bureau can no longer continue this policy. The failure of the bureau to certify the college to the Secretary of the Treasury would force it to close its doors.

The Agricultural and Mechanical College for Negroes is not now a collegiate institution. It could not advantageously become one in the near future. The committee is of the opinion that the development of it into a genuine college should be a matter of very gradual growth. Not until it can provide for the sound training in practical agriculture and the mechanic arts of all those who choose to resort to it, should the addition of technical courses of collegiate grade be considered. The committee believes that the institution should be encouraged and enabled to develop along lines similar to those followed by the Tuskegee Normal and Industrial Institute. This entails large provisions for farm training and trade training. A respectable beginning could hardly be made for less money than is asked for in the present budget of the institution.

STATE COUNCIL OF EDUCATION.

The foregoing discussion is predicated upon the self-evident needs of the State of Alabama for various types of higher education. The determination of the future educational policy of the State should rest upon a careful and continuous study of these needs. In the past the development of higher education, not only in Alabama, but more or less throughout the country, has not been based upon such study. It has proceeded largely by guesswork. The interests of the State in a unified and economical program have been subordinated to institutional ambitions and to political pressures wholly unrelated to education. Both of these distorting and costly influences can be eliminated. A simple and inexpensive device will serve the purpose.

The committee has already recommended the establishment of a State council of education composed of two members of the State board of education and the State superintendent of public instruction, one member of the governing board of each of the three higher institutions for whites, and the president of each of these institutions. The council's major task would be the coordination of the educational efforts of the State. Coordination must rest upon a clear comprehension of the ends to be sought. The State council should therefore be required by law to investigate the major fields of productive activity and to report on both the numbers of workers required in each field and the kinds of training necessary to fit them for their several tasks. Such information would enable the schools within limits to direct the flow of students to the vocations with the largest opportunities and to adapt training progressively to the specific demands of each calling. Probably the first of the council's investigations should be in those unexplored fields of professional practice which have been discussed in this chapter.

On the basis of its findings the council would be in a position to allocate wisely among the existing agencies the different portions of the task of training in harmony with their legally prescribed limitations and the division of the educational field among them. It should be empowered to do so.

The experiences of the war have furnished a new understanding of the importance of the cooperation of nonofficial civic agencies in determining State and National policies in whatever field. The committee therefore suggests that there be associated with the State council of education two advisory boards; one composed of delegates from the central State bodies representing agriculture, commerce, transportation, manufacturing, and labor; the other composed of representatives of educational interests such as the State Teachers' Association, the State Association of Colleges, etc. The advisory board representing productive interests would assist in determining the sequence and range of the council's investigations and would enlist the cooperation of the industries. The educational advisory board would aid in devising methods of instruction and in interpreting to the schools the purposes underlying the work of the council.

Chapter XXI.

ADMINISTRATION OF HIGHER EDUCATION IN ALABAMA.

I. GOVERNMENT.

Form and character of governing boards.—In common with many of the earlier settled States Alabama has provided for higher education in more than one institution. The three institutions of higher learning in this State were established at different times and were placed under separate boards of control. The board in each case includes the governor and the State superintendent of education as ex-officio members and a representative from each of the 10 congressional districts. The boards of the university and the Polytechnic Institute have an additional member from the district in which each is located, making a total of 13 members. The board of the Girls' Technical Institute comprises two additional members from the State at large, making a total of 14 members. The members of the university and the Polytechnic Institute boards hold office for 12 years, while those of the Girls' Technical Institute hold office for 8 years.

The appointments of the several boards are made in such manner as to provide for a continuation in service of a majority of the members. In the case of the Alabama Girls' Technical Institute, as explained elsewhere, this does not always hold true. The members of the university board are nominated by the remaining members of the board, while those of the other two institutions are nominated by the governor. The nominations in all three cases are contingent upon the approval of the senate at the first succeeding session of the legislature, but the nominees serve from the date of nomination.

It will be noted that the method of appointment of the university board is quite different from that of the other boards. It is generally believed that a board appointed by the governor is more directly responsible to the people, but in Alabama there seems to have been very little objection to the self-appointed board. In this case it is claimed that the interests of the people are fairly well safeguarded by the provision that the nominations must be approved by the senate. On the other hand, it is frequently asserted that the self-appointed board is able either to maintain or to change policies of administration by the selection of men of known opinions.

Both in the institutions affected and throughout the State there seems to be complete satisfaction with the governor-appointed boards. The appointees, during recent years, have been men of good standing and generally have performed their duties to the entire satisfaction of the people. In most States trustees of State universities are appointed by the governor. Of the 43 State universities of the country, 35 are appointed—31 by the governor, 3 by the legislature, and 1 by the State board of education. Five are elected by the people and three are self-perpetuated. Besides that of the University of Alabama the self-perpetuating boards are those of the State university of New Jersey (Rutgers) and Cornell University. In both of these cases the interests of the people are safeguarded by special provisions. In the case of New Jersey, a State board of visitors, appointed by the governor, is provided. The board of Cornell comprises 40 members, only 15 of whom are self-perpetuating. Of the remainder, 5 are appointed by the governor, 10 by the alumni, 1 by the State grange, 1 by bequest, and 8 are exofficio members.

It may be seen that the University of Alabama stands practically alone among State universities in the method by which its board of control is provided. The concensus of opinion both within the State and throughout the country is strongly in favor of the governor-appointed board and in view of the general approval of the principle as applied to the other Alabama State boards, there seems to be no reason for questioning its adaptability to the university.

The following table shows from the standpoint of occupation the composition of each board and of the all three boards combined. The exofficio members are not included:

TABLE 65.—*Occupation of board members.*

Occupation.	State University.	Polytechnic Institute.	Girls' Technical Institute.	Combined boards.
Banker	....	1	2	3
Engineer	....	1	....	1
Farmer	2	1	....	3
Housewife	....	....	1	1
Lawyer	[1]8	[1]6	[1]5	20
Manufacturer	1	....	1	2
Merchant	....	....	3	3
Physician	....	1	....	1
Public service	....	1	....	1

[1] One of this number operates a farm.

Thus it appears that out of a total of 34 appointed members constituting the three boards, 20 are drawn from the legal profession and only 14 from all other occupations. In connection with the composition of these boards the objection has been raised to such a strong preponderance of lawyers and such a meager representation of the dominent interests of the State. It is rather remarkable that more farmers, merchants, and manufacturers have not been selected, but this is not necessarily a proof of weakness. It is an indication, however, that men with political aspirations have been selected rather than those who may be better qualified but who must be urged to accept public offices. In the nomination of men for representation upon boards of control, the representation of special interests or classes is not the chief consideration, but rather to select men with breadth of vision and with deep public spirit. The evidence collected shows that in general men of this type have been selected during recent years. Lack of interest manifested by nonattendance at meetings is the most serious charge that may be laid against the members comprising the boards of the past few years and this charge must be restricted to a small proportion.

Although the three higher institutions admit women, the appointment this year of women to the board of trustees of the Alabama Girls' Technical Institute marks the first case in which a woman has been selected for any of the boards. It would seem that the board of each institution where women are enrolled should include at least one woman.

In size the Alabama boards are larger than the average and somewhat larger than is generally believed to be the most appropriate size from the standpoint of expenditious legislation. The number of members comprising each board, however, is not objectionally large and for Alabama is to some extent an advantage in that all sections of the State may be represented.

The committee commends Alabama's practice in appointing its board members on a fractional basis. This practice generally renders it difficult for any administration to appoint a controlling fraction. In the case of the Alabama Girls' Technical Institute, however, the practice is to appoint one-half of the board at alternating sessions of the legislature. This frequently enables the administration in power to appoint a majority of the members. Of the present board 7 out of the 12 appointed members were nominated by the present governor.

The committee commends also Alabama's practice of appointing members for long terms. Such practice lends dignity to the office, resulting generally in attracting better men to fill vacancies. It is the belief of the committee, however, that the board of the Alabama Girls' Technical Institute should be appointed for 12 years in harmony with the other two boards.

The committee commends also the practice of remunerating members only for expenses incurred upon attendance at meetings. Experience has shown that a better type of board member generally may be obtained on a gratutitous basis than when the position carries a salary. The reason for this is that the salaries usually offered are not adequate to attract the men and women who should be appointed.

Powers and duties of boards of control.—The powers and duties of the boards of the university, the Polytechnic Institute and the Girls' Technical Institute are described in articles 21, 24, and 25, respectively, of chapter 41 of the Code of 1907. These may be summarized as follows:

1. The State University.

(*a*) (Section 1869.) "To carry into effect the purposes and intent of the Congress of the United States in the grant of lands by the act of April 20, 1818, and of the act of March 2, 1819, to this State, to be by it held and administered for the benefit of a seminary of learning."

(*b*) (Section 1870.) General powers, duties, and liabilities of such corporation.

(*c*) (Section 1871.) Power of holding and disposing of property.

(*d*) (Section 1875.) To organize the university by the appointment of instructors and officers; and to fix their salaries and to increase and reduce the same.

(*e*) To institute, regulate, alter or modify the government of the institution.

(*f*) To prescribe courses of instruction, rates of tuition, price of board, and regulate the necessary expenses of students.

(*g*) To confer such academic and honorary degrees as are usually conferred by literary institutions.

(*h*) To delegate powers to faculty.

(*i*) (Section 1876.) To elect by secret ballot board members to fill vacancies.

(*j*) (Section 1878.) Shall meet at least once in each year.

(*k*) (Section 1879.) Proceedings must be recorded.

(*l*) (Section 1880.) Shall make a full report of transactions at each meeting of the legislature.

(*m*) (Section 1886.) May sell, lease, or make other disposition of lands, selected under act of Congress of April 23, 1884.

(*n*) (Sections 1887 and 1888.) May create an executive committee of board members upon which may be conferred full power in the leasing, selling, or conveying of university lands.

2. The Alabama Polytechnic Institute. The powers and duties of the board of this institution are similar to those of the university board, differing mainly in the following particulars:

(*a*) It is charged with the duty to carry out the provisions of the Federal act of 1862 instead of those of 1818 and 1819.

(*b*) It is empowered to confer such academic and honorary degrees as are usually conferred by institutions of similar character.

(*c*) The board is not given the power to fill vacancies on the board itself.

(*d*) No power is specifically indicated for the disposition of property, for the delegation of authority to faculty, nor for the creation of an executive committee with the full authority of the board, but in a blanket provision the board may do whatever else they may deem best for promoting the interests of the institute.

3. The Alabama Girls' Technical Institute. The powers and duties of the board of this institution are somewhat different from those bestowed upon the boards of the other higher institutions of the State.

(*a*) (Sections 1912 and 1913.) General corporate powers.

(*b*) (Section 1914.) To provide for instruction in the liberal arts and sciences; to provide for the establishment of the following academic departments:

(1) English, (2) mathematics, (3) history and political economy, (4) psychology and education, (5) ancient languages, (6) modern languages, (7) chemistry and geology; (8) physics and astronomy, (9) biology—botany, floriculture, and horticulture; and to provide for the establishment of the following industrial departments: (1) art—drawing, painting, and designing; (2) vocal music; (3) instrumental music; (4) commercial bookkeeping, stenography, typewriting, telegraphy; (5) domestic art; (6) domestic economy; (7) dairying; (8) physical culture; (9) manual training.

(*c*) (Section 1915.) To confer regular and honorary degrees and to grant diplomas or certificates.

(*d*) (Section 1916.) Shall elect a president with specific qualifications and fix the salary of the office.

(*e*) (Section 1917.) Shall establish such additional departments in the school as they deem necessary and proper and fix the salary or compensation to be paid to the professors, directors, and instructors therein. Officers of instruction shall be appointed by the board upon nomination of the president of the institute.

(*f*) (Section 1918.) Shall elect a secretary and fix the compensation and prescribe the duties of such officer.

(*g*) (Section 1919.) Shall elect a treasurer and fix compensation.

(*h*) (Section 1920.) Power to remove treasurer in case the institutional funds are in danger of being lost, and appoint a temporary custodian.

(*i*) (Section 1928.) Power to condemn property needed by the institute.

(*j*) (Section 1930.) Upon the approval of the governor, may sell or convey lands granted by Congress to the State of Alabama for the use of the institute.

These prescriptions of the powers and duties of the governing boards are not radically different from those of boards of higher institutions in many other States, and have resulted in little or no confusion, at least during recent years. The chief deficiencies of these prescriptions are found in the failure to restrict the powers and duties rather than to broaden their scope. For example, practically unlimited power in the establishment of departments is conveyed by the failure to restrict the scope of each institution. The only restriction on the board of the university in this respect is found under "g," which gives the power to confer such academic and honorary degrees as are usually conferred by literary institutions. The term "literary institutions" is not defined and the board has not limited the institution to the conferring of degrees for literary achievement.

With regard to the Alabama Girls' Technical Institute the board is given definite powers concerning the scope of the instruction. This definition of the scope, however, loses some of its force in a later provision authorizing the board to "establish such additional departments in the school as they deem necessary and proper."

In the prescribed powers and duties of the board of the Alabama Polytechnic Institute the only suggestion limiting the scope of the institution is that contained in the article of incorporation (section 1899, of the Code of 1907) which provides for the establishment of a board of trustees "to carry into effect the purpose and intent of the Congress of the United States in the grant of lands by the act of July 2, 1862." Such act provides that the proceeds from the sale of lands donated by the Federal Government shall constitute a perpetual fund the interest from which shall be appropriated by the State "to the endowment, support, and maintenance" of a college "where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts."

It is to the credit of the board of the Polytechnic Institute that the purpose and intent of this act has been fairly interpreted and executed. The institute, in 1884, ceased to offer a curriculum leading to the A. B. degree. It has continued up to the present time to offer a "general course" leading to the degree of B. S. This curriculum constitutes a combination of general service courses all of which, with the exception of Latin, are required in the technical curricula offered to agricultural and engineering students. Latin is required of pharmacy students. This curriculum, therefore, may be regarded as an incidental item in the institution's program and the same is true of the premedical curriculum recently offered. The latter, however, has a definite aim and since it duplicates the work of the university may be regarded as a radical departure from the institution's long-established policy.

Furthermore, there is little in these prescriptions that limits the functions of the several boards. Aside from certain unusual or specified functions, the sphere of a governing board generally is limited, either by legislative action or agreement, to three main activities; namely, (1) The determination of the general policies of the institution under its control, in consultation with the executive officers; (2) the appropriation of moneys, or the approval of the allotments made by public appropriating bodies; and (3) the appointment of institutional employees on the recommendation of the institutional executive officers. From the information at hand it is apparent that the governing boards in question have generally acted in harmony with these principles.

Centralized control.—While many States probably have profited from the promotion of higher education through a single institution, the practice has not always proved satisfactory, especially in the Southern States. It would seem, therefore, that in the light of the experience of some of the neighboring States, Alabama has profited from maintaining at least two distinct institutions of higher learning—the State University and the Polytechnic Institute. In the years following the passage of the land-grant act of 1862 and the establishment of the older colleges under its provisions, agricultural education, and in a lesser degree, industrial education, were relatively unpopular and there was little available knowledge upon which to base courses of study. Furthermore, the increasing demand for training in the liberal arts and in the higher professions resulted in the swelling of the enrollments and consequently in greatly increasing the operating expenses. Under such conditions the funds for agricultural and industrial education, in States where the land-grant college was associated with the university, were often more or less submerged in the general funds of the university.

In some States the land-grant college has been completely detached from the university after a period of combined administration. In Georgia the separation was not so complete, but it was found desirable to place the land-grant college under a board which, although subordinate to the university board, is quite distinct in administrative control.

The following statement shows in a general way how the several States have organized their higher education:

(1) States having all higher education consolidated in a single university, comprehending all departments provided in the State, with centralized administration and under a single board of control: Arizona, Arkansas, California, Idaho, Illinois, Kentucky, Louisiana, Maine, Minnesota, Missouri, Nebraska, Nevada, Tennessee, Vermont, West Virginia, Wisconsin, Wyoming.

(2) States having a single college (commonly a land-grant college for agriculture and the mechanic arts) and not providing other forms of higher education in a State institution:[1] Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Pennsylvania.

(3) States having two State institutions (unless otherwise indicated a State university and a land-grant college for agriculture and the mechanic arts): Alabama, Florida (State University, State College for Women), Indiana (Indiana University, Purdue University), Kansas, Michigan, North Carolina, North Dakota, Oregon, Utah, Washington.

(4) States having three or more State institutions: Colorado, Georgia, Iowa, Mississippi, Montana, New Mexico, New York, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Virginia.

Thus it appears that 25 States provide in one institution whatever higher education is afforded; 10 States maintain two separate institutions, and 13 States maintain three or more higher institutions. Eight of the States maintaining two or more institutions, Florida, Georgia,[2] Iowa, Kansas, Mississippi, Montana, North Dakota, and

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[1] A number of States partially support higher education in one or more institutions over which they have no control. Such institutions are not regarded here as State institutions.

[2] The University of Georgia comprises several quite independent units, each with a distinct board, but all are subordinate to the university board.

South Dakota have consolidated higher education under a centralized board of control.

While conditions existing in Alabama during the early development of the higher institutions probably justified the promotion of higher education in three distinct institutions, it is very doubtful whether, either from the viewpoints of economy or efficiency, such an arrangement should be continued. However, the experience of other States shows that on account of regional pride and attachment the abandonment or the removal of a long-established institution is almost impossible. The best that can be expected is that the fields of the several institutions be so defined and restricted as to prevent wasteful duplication.

Assuming that the three higher institutions are to be maintained, the chief problems in higher education from the viewpoint of administrative control are the following:

1. What provision can be made to insure proper development in all needed branches of higher education and at the same time to prevent wasteful duplication and unjustifiable expansion?

2. How may the three institutions be administered so as to prevent sectional and institutional competition for students and financial support?

3. How may the work of the higher institutions be coordinated with that of the public school system?

It is obvious that the solution of all three of these problems turns upon the consideration of the programs of higher education in the State as a single program. This point of view has already been emphasized in Chapter XX. In that chapter and in Chapter IV the creation of a State council of education has been recommended and certain of its functions discussed. In addition to what has already been said it should here be sufficient to note that the council is expected to make recommendations to its constituent boards concerning all matters affecting two or more institutions or affecting the relations of the higher institutions with the public school system in general. Matters of policy may originate either with the separate boards or with the council, but in general such matter would originate with the separate boards.

II. INTERNAL ADMINISTRATION.

The University.—The university comprises five coordinate major divisions, as follows: College of arts and science, college of engineering, school of education, school of law, and school of medicine. The dean in charge of each of these divisions is responsible to the dean of the university who in turn is responsible to the president of the university. All deans, however, report directly to the president concerning financial matters relating to their respective divisions. Two other administrative officers—the treasurer and the dean of women—report directly to the president. The librarian and the director of the museum are directly responsible to the dean. The administrative relationships differ from those in some State universities in that the deans of the several divisions have no direct administrative relationship with the president. Such an arrangement relieves the president of much administrative detail and enables him to devote more time to the larger problems of the university.

The dean of women acts largely as an advisor and as an officer of discipline.

The present treasurer serves as purchasing agent for the institution and gives some instruction in engineering. Since all financial matters must pass through the office of either the dean of the university or the president, the several divisions and departments have no direct connection with the treasurer's office.

The functions of the deans of the several divisions are similar to those of deans in other State universities. The dean of the college of arts and sciences is also dean of the university and serves as head of the department of English. In addition to the regular duties of these positions he is responsible for the registration and classification of students in all divisions.

The dean of the school of education, in addition to his duties as dean, is responsible for the inspection of high schools and serves as professor of education and director of the summer school. He is also responsible for the special training of teachers of trades and industries under the provisions of the Smith-Hughes act.

The dean of the college of engineering serves also as head of the department of civil engineering.

The dean of the school of medicine, who maintains a private practice in the city of Mobile, serves also as professor of obstetrics and has general supervision of the department of pharmacy which is associated with the school of medicine.

The dean of the school of law, likewise, serves as professor of law.

The legislative body of the university is the university faculty comprising all professors, associate professors, assistant professors, and instructors. The institution has provided for an advisory council comprising seven faculty members. This body "designed to discuss questions of importance that arise from time to time between faculty meetings * * * . No action, however, is taken by the council that is not subject to review by the faculty."

Faculty committees are provided for matters concerning (*a*) admission, (*b*) instruction (a separate committee for each division), (*c*) library, (*d*) athletics, (*e*) student publications, (*f*) university publications, (*g*) student organizations, (*h*) affiliated schools, (*i*) recommendation of teachers, (*j*) graduate study, and (*k*) examinations.

The Alabama Geological Survey, although not organically connected with it, is closely related to the university. The director of the survey is emeritus professor of geology and director of the university museum.

The Polytechnic Institute.—The institute as now organized comprises seven major divisions as follow: (1) College of agricultural sciences, (2) college of engineering and mines, (3) college of veterinary medicine and surgery, (4) academic departments, (5) summer school, (6) agricultural extension service, (7) agricultural experiment station. Each of the first four divisions is in charge of a dean and each of the latter three is in charge of a director. The deans and directors are directly responsible to the president. In addition to the above-mentioned divisions, there is a group of separate departments including education, physical training, and library, the heads of which are also directly responsible to the president. Among the departments of the college of agricultural sciences is the department of pharmacy.

The functions of the office of dean are somewhat different from those of such an office in most institutions and the administrative authority of the office is more limited than is usually the case. The following extracts from the "General Regulations" of the institution will show the tendency to handle in the office of the president many matters that are generally handled in the offices of the respective deans:

> Section 37. If a student repeatedly absents himself from recitations, whether on account of sickness, or other cause, or manifests a continued want of application or capacity, the instructor will promptly submit the matter to the president.
>
> Section 54. Excuses must be made to the president at the first office hour, either orally or in writing, as he may require.
>
> Section 62. Students compelled to be absent from any recitation shall apply for leave to the professor; to leave the college, to the president; to be excused from military duty, to the commandant.

Furthermore the lines of demarkation between the divisions are not well marked. The limits of the jurisdiction of the dean of academic departments, for example, have never been defined and seem to vary according to the nature of the matter under consideration. Considerable confusion and loss of initiative have resulted from this loose scheme of organization.

The dean of agricultural sciences serves also as professor of general and agricultural chemistry and as State chemist in charge of the analysis of fertilizers, oils, feeds, etc. The dean of the college of engineering and mines is also professor of mechanical engineering and director of the laboratories for the testing of fuels, gases, and lubricants. The dean of the college of veterinary medicine and surgery is also professor of physiology and veterinary science and State veterinarian in charge of hog-cholera control. The dean of the academic departments serves also as professor of history and Latin and is responsible for the classification of students in all divisions.

The director of the summer school is also head of the department of education, which, in the catalogue, is listed as the "school of agricultural education" and which is distinct from the other administrative divisions.

The director of the agricultural extension service serves also as director of the agricultural experiment station and head of the department of agronomy.

In business or financial matters the relationship is a direct one between the president and the several department heads. The president assumes the responsibility for the allotment of funds and approves all expenditures. Such a procedure multiplies the administrative duties of the president's office, and even with the assistance of the executive secretary, renders it difficult for the president to give appropriate attention to the larger problems of administration. The executive secretary serves as registrar and without any definite detail of authority assists the president in various administrative matters.

Committees are provided for the handling of matters relating to (*a*) discipline, (*b*) entrance examinations, (*c*) examination of special students, (*d*) public lectures, (*e*) liberary, (*f*) athletic, (*g*) grounds and buildings, and (*h*) alumni appointments. There is no committee on courses of study.

Many administrative complications have arisen also as a result of attempting to promote three or four lines of service through a single specialist. In other words, certain members of the faculty are also members of the experiment station staff, the extension force and the police-control work of the State and their salaries come from various sources. One individual, for example, serves as professor of horticulture, horticulturist of the experiment station, extension specialist in horticulture, and State horticulturist in charge of nursery inspection throughout the State. While there are few such cases as this, there are many cases where two and three offices are combined. The shortage of funds of course is responsible for the existance of such a condition. The deleterious effect of such dispersion of effort is quite obvious.

It will be observed, therefore, that the institution is organized both from the standpoint of subject and kind of service. That is, the institution performs four distinct lines of service—resident instruction, extension instruction, research, and police control or inspection. Each line of service is separately financed, each forms a distinct program, and each requires a different type of personnel. These four kinds of service therefore form a logical basis for a division of responsibility. It is obvious that an institution performing four distinct lines of service should be organized differently from one performing but one function.

Furthermore, since each of these lines of service is concerned with the same subjects, it is natural that each should be organized from the standpoint of subject matter in about the same way. The division responsible for resident instruction, it seems, should be organized or subdivided in about the same manner as a college or university with the single function of resident instruction.

The officers of the institution recognize these four lines of service, and they also recognize the four organic divisions based upon subject matter—agriculture, engineeering, veterinary medicine, and academic subjects. Confusion has arisen, as in other similar colleges, from an attempt to administer the former divisions as parallel with the latter. In reality the lines of administrative control pass transversely through the various subject-matter divisions. Failure to recognize this fact renders it difficult to understand administrative relationships.

There is a growing tendency among the land-grant colleges to bring about a more distinct organization for each line of service. This is particularly true with regard to the extension and control phases. While in the main a distinct staff of specialists is recommended for each line of service, there is a common belief that the specialists in one line may profitably undertake a limited amount of work in one or more other lines. Where the work is placed on the project basis, and where a definite time is indicated for each project, such an arrangement is not difficult to provide for. There are grave dangers, however, in requiring specialists to contribute to more than two lines of service. The difficulty in prorating salaries and the loss in efficiency from diversification are intensified in proportion to the number of lines of service participated in by the several members of the staff.

The more complete separation of the lines of service does not mean, necessarily, that the specialists engaged in a common subject should be separated. The consensus of opinion is strongly in favor of bringing together in a common department all specialists engaged in a common subject, regardless of whether they are specialists in teaching, in extension, in research, or in inspection.

The Girls' Technical Institute.—The organization of the Alabama Girls' Technical Institute is a simple one, comprising 13 departments, the heads of which are responsible directly to the president. The professor of mathematics serves also as dean, which office is maintained largely for purposes of discipline. The professor of history serves also as purchasing agent.

III. CONCLUSIONS CONCERNING ORGANIZATION AND ADMINISTRATION.

Considering the disadvantages under which the State is promoting higher education, especially by reason of having to conduct the work in three institutions, the administrative organization, in many respects, is commendable. Only in a few respects are modifications suggested:

1. The constitution should be modified to provide for the appointment by the governor of members of the university board of trustees.

2. The constitution should be modified to provide for lengthening the tenure of office of the members of the board of trustees of the Girls' Technical Institute in conformity with that of the members of the boards of the other higher institutions of the State.

5. That the Alabama Polytechnic Institute may be reorganized in such manner as will distribute the administrative load, the following plan is suggested:

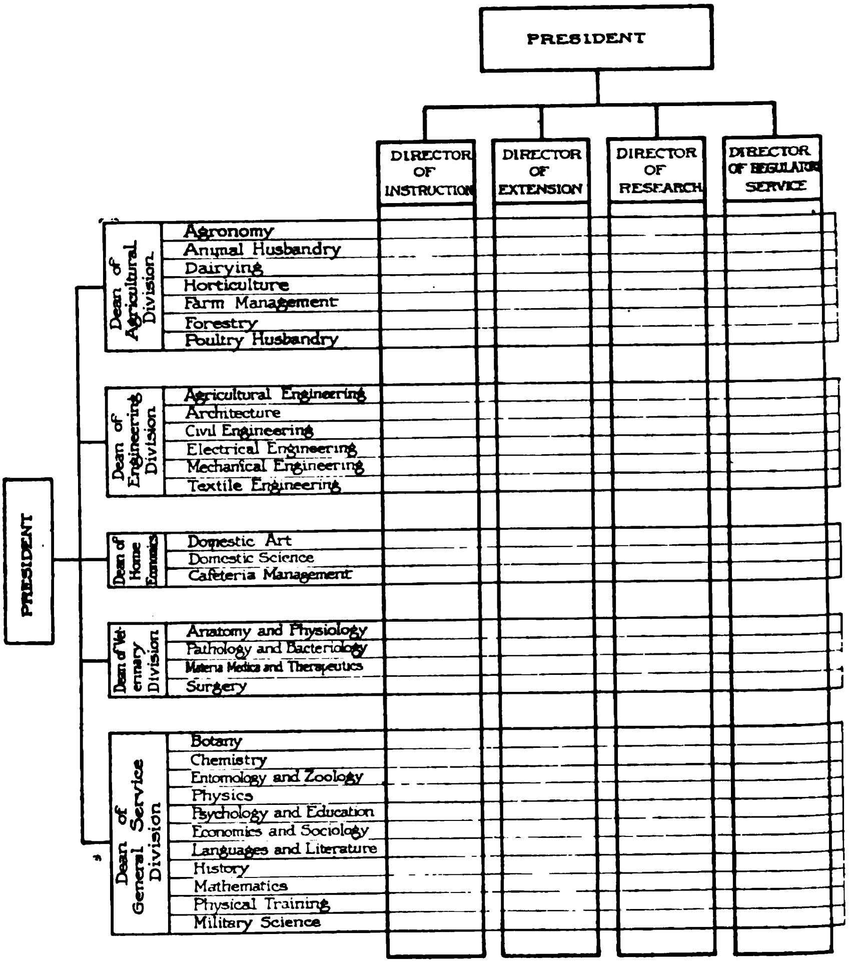
The institution may be divided primarily into four administrative units—one for each kind of service: resident teaching, extension teaching, research, and control. Each of these divisions should be in charge of a director, who shall be responsible to the president. Each should be subdivided in about the same manner as colleges performing a single service, that of resident teaching. This secondary subdivision is based wholly upon subject-matter relationships and provides for agriculture, engineering, home economics, veterinary science, and general service subjects. This plan contemplates also, as shown in the accompanying diagram (fig. 42), that all specialists working on a common subject will be grouped together regardless of the kind of service performed.

The powers and functions of the several officers provided for in this plan may be stated briefly as follows:

(1) The heads of the several subject-matter departments act mainly as chairmen of their respective groups. They, in consultation with the other members of the group concerned, initiate projects and recommend them to their respective deans.

(2) The several deans serve as coordinating officers between the several departments within their respective divisions. The projects

initiated in their respective divisions, after proper coordination and after being approved by the president, are transmitted to the director of the administrative division concerned with the project in question.



SUGGESTED PLAN OF ORGANIZATION FOR ALABAMA POLYTECHNIC INSTITUTE

FIG. 42.

(3) The director of instruction, in consultation with the deans, the heads of the departments, and the individuals concerned, outlines the several curricula offered by the institution. He also provides for efficiency in teaching in so far as it is possible for an administrative officer to do so.

(4) The director of extension teaching, in consultation with the deans, the heads of departments, and the several specialists concerned.

approves all projects concerning extension and develops them into the general extension program.

(5) The director of research, in consultation with the deans, the heads of departments, and the specialists concerned, approves all research projects and develops them into the general research program.

(6) The director of the regulatory service is responsible for carrying out the provisions of the laws concerning the various forms of regulatory work assigned to the institution.

(7) The president is the coordinating officer for both subject matter and administration. He employs all specialists on the recommendation of the directors and deans concerned.

The four directors have no authority over subject matter. In like manner the deans and the heads of the several departments have no authority over either of the four administrative programs.

Two or more offices may appropriately be combined, but in such cases the functions should be kept distinct. The office of president, for example, may be combined with that of director of the regulatory service; the director of research may serve as head of one of the departments; the head of one of the departments may serve as director of instruction; or the dean of the division of agriculture may serve as head of one of the agricultural departments. There are certain combinations, however, that are not advisable, as, for example, the combining of the office of extension director with any other office. The character and magnitude of the duties of such office demand the full attention of one man.

6. The "school of agricultural education" at the Alabama Polytechnic Institute should be regarded as a department in the general service division. The general courses in education may be given by this department, and the work in special methods should be given in the respective subject-matter departments. The responsibility for the coordination of the teacher-training curricula, as with other curricula, rests with the director of instruction, provided for under the preceding recommendation.

THE FACULTIES.

1. TRAINING AND EXPERIENCE OF FACULTY MEMBERS.

In view of the many factors involved it is difficult to estimate, even roughly, the quality of instruction provided by the higher institutions. For obvious reasons no attempt was made to compare the teaching methods of faculty members. The only available evidence bearing upon the subject is that which pertains to the professional preparation, the experience in college teaching, and the professional activities and achievements of the individual faculty members.

The university.—The following table, prepared under the direction of the president, shows the academic training, the experience in college teaching, and the publications of the several members of the university faculty:

TABLE 66.—*Training, experience, and publications of the teaching staff of the university.*[1]

Title.	Department.	Academic training.		College teaching.			Publications last two years.	
		Highest degree.	Institution.	Years at the university.	Years elsewhere.	Total.	Research.	Nonresearch.
Professor and university dean.	English	Ph. D.	Harvard	20	7	27	0	0
Professor and dean	Education	A. M.	Columbia	12	8	20	0	2
Do	Civil engineering	C. E.	Cornell	7	8	15	0	0
Do	Law	A. M.	do	7	15	22	0	0
Professor emeritus	Geology	Ph. D.	Heidelberg	41	0	41	0	6
Professor	History	A. M.	Alabama	46	0	46	0	0
Do	Biology	Ph. D.	Munich	22	0	22	0	0
Do	Latin	Ph. D.	Johns Hopkins	20	1	21	0	0
Do	Romance languages	Ph. D.	do	20	0	20	0	1
Do	German	A. M.	Alabama	17	5	22	0	0
Do	Physics and electrical engineering.	E. E.	Case	1	4	5	1	0
Professor and treasurer	Engineering	C. E.	Alabama	8	0	8	0	0
Professor	Geology	Ph. D.	Johns Hopkins	13	0	13	5	8
Do	Secondary eduction	A. M.	Milligan	7	5	12	1	3
Do	Economics	A. M.	Virginia	6	5	11	1	0
Do	Philosophy	A. B.	Southwestern	1	11	12	0	2
Do	Law	J. D.	Michigan	6	2	8	0	0
Do	Mathematics	Ph. D.	Harvard	2	7	9	2	0
Do	Mechanical engineering	M. E.	Virginia	7	4	11	0	0
Do	Chemistry and metallurgy.	Ph. D.	Chicago	10	3	13	0	6
Do	Vocational education	B. S.	Columbia	1	14	15	0	3
Associate professor	Chemistry	Ph. D.	Virginia	8	8	16	2	2
Do	English	A. M.	Harvard	15	0	15	0	0
Assistant professor	Romance languages	Ph. D.	do	3	1	4	0	0
Do	Mathematics	A. B.	Alabama	5	0	5	0	0
Do	Physics	B. S.	do	4	4	4	0	0
Adjunct professor	English	A. M.	Columbia	2	2	4	0	2
Associate professor	Greek and Latin	Ph. D.	Munich	13	0	13	0	0
Instructor	Home economics	A. B.	Indiana	1	0	1	0	0

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[1] School of medicine excluded.

TABLE 67.—*Summary of data concerning training, experience, and publications of the teaching staff of the university.*

Rank.	Total number.	Highest degree held.			College teaching experience in years.							Publications during last two years.			
												Number of contributions.		Number of contributors.	
		Bachelor.	Master.	Doctor.	1–5.	6–10.	11–15.	16–20.	21–25.	Over 25.	Average.	Research.	Nonresearch.	Research.	Nonresearch.
Professors	21	2	10	9	1	3	8	2	4	3	17.7	10	31	5	6
Assistant and associate professors	7	2	2	3	4	0	2	1	0	0	8.7	2	4	1	2
Instructors	1	1	0	0	1	0	0	0	0	0	1.0	0	0	0	0
Total	29	5	12	12	6	3	10	3	4	3	15.0	12	35	6	10

From the data presented here the following deductions may be made:

1. Out of a total of 29 members of the teaching staff 28 are of professional rank and 21 of these are full professors. There is a conspicuous lack of balance between the number of men of high and of low rank. The explanation for this is probably found in the inadequacy of financial support, which has made it necessary for the university to maintain a large number of departments with but one member and to depend upon advanced students for assistance in laboratory and outside work. Undoubtedly this has been the most prudent procedure under the circumstances, but such practice can not fail to affect seriously the quality of instruction. The detrimental effects are felt not only in the generally inferior type of service rendered by student assistants, but more particularly in the necessity for organizing classes into large sections.

2. A large proportion, 82 per cent, of the instructing staff have received professional preparation equivalent to that represented by a master's degree, and 41 per cent have received the equivalent of a doctor's degree. It is of interest to note also that a large proportion of the instructors have received their degrees from institutions other than that with which they are now connected.

3. The instructing staff is composed mainly of men who have had much experience in college teaching. The average amount per person is 15 years, and excluding those below the rank of professor it is nearly 18 years. The experience in college teaching of 10 members of the staff is limited to that at the University of Alabama.

4. Only 13 members of the teaching faculty have made professional contributions during the past two years, and the contributions of only 6 represent the result of research. The total contribution of all members during the period amounts to 41 publications, of which 12 represent the product of research. Only 11 members of the faculty out of 29 have made any research contribution since entering upon their career. In view of the heavy loads carried by the faculty members it is not surprising that they have not been more active in research and more conspicuous in productive scholarship.

The Polytechnic Institute.—The following table, prepared under the direction of the president, shows the training, experience in college teaching, and number of publications of the teaching staff.

TABLE 68.—*Training, experience, and publications of the teaching staff of the Polytechnic Institute.*

Title.	Department.	Academic training.		College teaching.			Publications in past two years.	
		Highest degree.	Institution.	Years at Alabama Polytechnic Institute.	Years elsewhere.	Total years in college teaching.	Research publications.	Other publications.
Professor and dean	Latin and history	Ph. D.	Johns Hopkins	30	3	30	0	1
Do	Chemistry	M. S.	Alabama Polytechnic Institute.	25	7	32	3	0
Do	Mechanical engineering.	M. E.	Purdue	31	2	31	0	0
Do	Veterinary medicine.	D. V. M.	Iowa State	27	3	30	1	4
Professor and director	Agronomy	M. S.	Miss. A. & M.	23	4	27	0	6
Professor	Electrical engineering.	M. E.	Alabama Polytechnic Institute.	20	5	25	0	1
Do	Mathematics	M. E.	do	26	1	27	0	0
Do	Entomology and zoology.	Ph. D.	Massachusetts Agricultural College.	11	0	11	1	0
Do	Machine design and drawing.	M. E.	Alabama Polytechnic Institute.	22	0	24	7	3
Do	Physical chemistry	M. A.	Michigan	26	1	27	0	0
Professor and manager	Electrical engineering and power plant.	E. & M. E.	Alabama Polytechnic Institute.	19	0	19	1	0
Professor	Mathematics	Ph. D.	Johns Hopkins	9	4	13	0	0
Do	Physical training and mathematics.	A. B.	Yale	15	0	15	0	0
Do	English	M. S.	Alabama Polytechnic Institute.	15	0	15	0	5
Do	Animal husbandry	B. S.	Missouri	5	2	7	3	1
Do	Pharmacy	B. S.	Michigan	6	6	6	2	0
Do	Qualitative chemistry.	M. S.	Alabama Polytechnic Institute.	15	0	15	0	0
Professor and registrar	Mathematics and administration.	C. E.	do	12	0	12	0	0
Professor	Agronomy	M. S.	Wisconsin	10	0	12	2	0
Professor and director	Agricultural education and summer session.	M. A.	(Completed work Ph. D. Columbia).	4	2	6	0	0
Professor	Architecture	M. S.	Lehigh	3	10	13	0	0
Do	Horticulture	B. Agr.	West Va	2	6	8		0
Do	Botany	Ph. D.	Chicago	2	3	5	0	0
Do	English	M. A.	Howard	3	0	3	0	0
Do	Research laboratory.	Ph. D.	Minnesota	16	4	20	3	0
Do	Civil engineering	A. M.	Union University.	1	10	11	2	2
Do	do	Ph. B.	Brown	1	0	1	1	0
Do	Agricultural education.	B. S.	Iowa State	1	5	6	0	0
Associate professor	Horticulture	B. S.	Virginia Polytechnic Institute.	10	3	13	1	11
Do	Machine design and drawing.	M. E.	Alabama Polytechnic Institute.	15	0	15	0	0
Assistant professor	Chemistry	M. S.	do	7	0	7	0	0
Do	Veterinary medicine.	M. D. V.	McKillip's Veterinary College.	12	2	14	0	0
Do	Mechanical engineering.	M. E.	Alabama Polytechnic Institute.	12	0	12	0	0
Do	Entomology and zoology.	M. A.	Ohio State	1	2	3	0	0
Do	Botany	A. M.	do	1	3	4	1	0

TABLE 68.—*Training experience, and publications of the teaching staff of the Polytechnic Institute.*

Title.	Department.	Academic training.		College teaching.			Publications in past two years.	
		Highest degree.	Institution.	Years at Alabama Polytechnic Institute.	Years elsewhere.	Total years in college teaching.	Research publications.	Other publications.
Instructor	Mechanical engineering and drawing.	M. E.	Alabama Polytechnic Institute.	16	0	16	0	0
Do	Veterinary medicine.	D. V. M.	Chicago Veterinary College.	6	0	6	0	0
Do	History and Latin	M. S.	Alabama Polytechnic Institute.	6	0	6	0	0
Do	Chemistry	M. S.	do	5	0	5	0	0
Do	Veterinary medicine.	D. V. M.	do	3	0	3	0	0
Do	do	D. V. M.	do	2	0	2	0	0
Do	History and Latin	M. A.	Chicago	4	0	4	1	0
Do	Animal husbandry	B. S.	Alabama Polytechnic Institute.	1	0	1	0	0
Do	Mathematics, Spanish, and drawing.	M. E.	do	3	0	3	0	0

TABLE 69.—*Summary of data concerning training, experience, and publications of the teaching staff of the Polytechnic Institute.*

Rank.	Total number.	Highest degrees held.			College teaching experience in years.							Publications during last two years.			
												Number of contributions.		Number of contributors.	
		Bachelor.	Master.	Doctor.	1–5	6–10	11–15	16–20	21–25	Over 25.	Average.	Research.	Nonresearch.	Research.	Nonresearch.
Professors	28	7	16	5	5	5	9	2	2	7	16.1	26	32	11	9
Assistant and associate professors	7	1	6	0	2	1	4	0	0	0	9.7	2	11	2	1
Instructors	9	4	5	0	6	2	0	1	0	0	5.1	1	0	1	0
Total	44	12	27	5	11	8	13	3	2	7	12.8	29	43	14	10

From the above tables the following deductions may be drawn:

1. A relatively large proportion, 35 out of 44, of the members of the teaching staff are of professional rank and 28 of these are of the rank of full professor. This condition is similar to that in the university and may be attributed to the same cause—inadequate support. At this institution, however, some men are employed with the rank of instructor. Here again a larger number of student assistants are employed to make up for the inadequate supply of full-time instructors.

2. Of a total of 44 instructors, 32 have received professional training sufficient to give them a master's degree or its equivalent. Five of these have received a doctor's degree.

3. Forty-three per cent of the instructors have received their highest degree from the institution with which they are now engaged. Even among the instructors of professional rank 34 per cent have received their highest degree from the Polytechnic Institute. This condition is an indication of a tendency toward educational inbreeding. Additional evidence of this tendency is found in the fact that nearly half of the instructing staff have had no college teaching experience other than that obtained at the Polytechnic Institute.

4. On the whole the members of the teaching staff have abundant teaching experience, averaging nearly 13 years. The average for the full professors is over 16 years. A conspicuous feature of the faculty of this institution is the long tenure of office of many of its members. Ten members, including the president, have been connected with the institution for more than 20 years, and over half of them have held their positions for more than 10 years.

5. During the past two years the activity of the faculty in productive scholarships, as measured by their publications, has not been conspicuous, although professional contributions have been made by 19 members of whom 14 have made research contributions. In view of the amount of teaching and other duties required, this may be regarded as a good showing, but there is a conspicuous lack of activity in this direction among several important departments.

The Girls' Technical Institute.—The following table contains data concerning the training, experience, and publications of the Girls' Technical Institute:

TABLE 70.—*Summary of data concerning training, experience, and publications of the teaching staff of the Girls' Technical Institute.*

Rank.	Total number.	Highest degrees held.				College teaching experience in years.					Publications during last two years.			
											Number of contributions.		Number of contributors.	
		None.	Bachelor.	Master.	Doctor.	1–5	6–10	11–15	Over 15.	Average.	Research.	Nonresearch.	Research.	Nonresearch.
Professors	13	5	6	2	0	3	5	4	1	9.0	0	0	0	[illegible]
Assistant and associate professors	22	13	7	2	0	17	2	3	0	3.8	0	0	0	[illegible]
Instructors	2	1	1	0	0	2	0	0	0	1.0	0	0	0	[illegible]
Total	37	19	14	4	0	22	7	7	1	5.5	0	0	0	[illegible]

From the above tables it is clear that the faculty of the girls' technical institute comprises many individuals who are conspicuously lacking in training and experience. There are a number of notable exceptions, however, and there are a few individuals whose qualifications probably are much stronger than the tabulated statement seems to indicate. From the evidence the survey committee has been able to secure there is every reason to believe that the institution is meeting its obligations in a fitting manner. Despite the apparent deficiency in academic training on the part of several members of the faculty, the qualifications of the teaching staff fairly meet the requirements of a technical institute. In this respect, however, there it little to commend the present movement toward the creation of a standard college with four years of collegiate work.

2. THE WORK OF THE FACULTY MEMBERS.

On account of the variable service performed by faculty members it is difficult to establish any just basis upon which to measure their work. The duties of some may be limited mainly to those rendered in classroom and laboratory, while those of others may include such activities as service on committees, consultation with students, administration, and extension teaching. Furthermore, there is great variation in the activity of faculty members concerning productive scholarship and professional improvement. In the time at the disposal of the survey committee it has seemed impracticable to attempt the collection of evidence bearing upon the nonteaching duties of faculty members.

The measurement of the actual amount of time devoted to classroom or laboratory work is not so difficult, but here again many variable factors present themselves and complicate comparisons. The energy and time required of the several instructors in connection with the work of instruction differ in many ways, more particularly in (*a*) the number of students under instruction, (*b*) the character and amount of preparation necessary for each class or section, and (*c*) the labor entailed in the correction of papers, themes, reports, etc. It is obvious, therefore, that no single measure can give a fair and complete indication of the services rendered by the various instructors.

In measuring the instructional work of faculty members two methods may be employed. One of these consists in the use of the number of hours spent by the instructor in the classroom or laboratory, assuming that two hours of work in the laboratory are approximately equivalent to one hour in the classroom. Such a unit of measurement is essentially the same as the credit hour commonly employed by colleges. This basis of measurement is faulty, for the reason that it does not take into consideration the variable amount of outside labor required for classes of different sizes.

The second method available for the measurement of instructors' teaching loads is that which has come to be known as the "student clock-hour method." The unit of measurement in this method is the student clock hour, which is the instruction of one student during one 50-minute period per week for one semester in either classroom or laboratory. The instructional load represented by any course therefore may be determined by multiplying the number of students taking the course by the number of 50-minute periods in which the instruction is given. The teaching load carried by any instructor is determined by adding together the instructional loads of the several courses given. This basis of measurement although superior to the semester hour method, is not faultless. The chief defect is in the assumption that time spent in laboratory instruction is as burdensome as classroom instruction or that an instructor whose time is spent mainly in laboratory work is carrying as heavy a load as one who gives only classroom courses. It is defective also in that it does not take into consideration the difference in courses with regard to the nerve energy required or to the amount of outside preparation needed.

The use of either one of these methods by itself might lead to grossly distorted estimates of the services performed by different instructors. Either may be used to support the other and both in actual practice may well be supplemented by the addition of all available information concerning nonteaching service. Figures concerning both methods have been collected, but since such a large proportion of the instructors, especially those at the Polytechnic Institute, divide their time between two or more kinds of service, comparison is impracticable. From the information at hand, however, certain general deductions concerning teaching loads may be made:

The university.—(1) The average number of semester hours carried by instructors is approximately 15, but the teaching load of many individuals exceeds this by three or four hours. This represents a much heavier teaching load than is carried by the instructors of similar institutions.

(2) The average number of student clock hours per week carried by instructors is 372. This is a somewhat heavier burden than that carried by instructors of other institutions and yet it does not represent the conditions to be as serious as they really are. The average load in many departments exceeds 600 student clock hours per week. The average is brought down by certain low-average departments. For example, the average for the engineering departments for the year 1916–17 is 261 student clock hours. This may be accounted for in the large number of small classes in engineering, as shown under another head. It is apparent therefore that there is great variation in teaching loads as represented by student clock hours.

(3) If the university expects its faculty members to carry on research work, as all university men should, and to keep professionally alert, it must provide relief from the heavy teaching burdens under which most of its instructors are serving.

The Polytechnic Institute.—(1) Of a total of 44 members of the faculty, 32 have duties other than teaching. As pointed out in another section, many devote their time to two, three, or four kinds of service and receive their remuneration from various funds. Under such conditions it is difficult to compare teaching loads, and with a more accurate knowledge of the nonteaching activities it is difficult to make comparisons of the total service rendered by the several faculty members.

(2) From the information available it is apparent that the instructors are carrying heavy teaching loads in proportion to the division of time allotted for teaching. Considering only the fractions of the time allotted for teaching the average teaching load for the whole institution is approximately 15 semester hours per week.

(3) In certain cases where the time of instructors is undivided the number of semester hours carried is conspicuously high. For examples, the average load of the professor of architecture is 31 hours per week; that of the assistant professor of mechanical engineering, 21 hours; the professor of pharmacy, 25 hours; the professor of mathematics, 20 hours; and the professor of mining engineering, 24 hours.

The Girls' Technical Institute.—(1) The teaching load of faculty members at this institution is not excessively high considering the fact that much of the instruction is of subcollegiate grade. The loads in the departments of mathematics and Romance languages are especially high. The average number of student clock hours carried per week is 300.

3. SIZE OF CLASS SECTIONS AT THE THREE HIGHER INSTITUTIONS.

As shown elsewhere, there is a direct relationship between the size of the class sections and the cost of instruction. In general the larger the sections the lower the cost, but there is a generally recognized limit to the size from the standpoint of efficiency of instruction. The limit varies, however, according to the nature of the instruction. In the case of a lecture course there is no limit within the range of the instructor's voice, but in recitations or quizzes the limit generally is believed to be in the neighborhood of 30 students, and in laboratory courses about half that number. In the higher institutions of Alabama the size of the sections run to extremes in numerous cases. On account of large enrollments and relatively small number of instructors, there has been a tendency at all three institutions to offer a large number of lecture courses, some of which are given in classes of over 250 students. On the other hand, there are many sections enrolling very small numbers and these are responsible for raising the average cost of instruction. Obviously it is necessary to offer a certain number of courses for which there will be a limited demand, but few institutions can afford to offer such a large proportion of small enrollment courses as are given at the higher institutions of Alabama.

The university.—Table 71 shows the number of class sections with various enrollments at the university for the years 1916-17 and 1917-18:

TABLE 71.—*Distribution of class sections at the University of Alabama according to the number of students registered in each, 1916-17 and 1917-18.*[1]

Size of sections.	1916-17				1917-18			
	First semester.	Second semester.	Both semesters.	Per cent.	First semester.	Second semester.	Both semesters.	Per cent.
1-5 students	24	21	45	18.3	5	5	10	5.4
6-10 students	11	18	29	11.8	9	15	24	12.9
11-20 students	20	18	38	15.1	12	26	47	25.1
21-30 students	10	13	23	9.4	11	14	25	13.3
31-40 students	12	20	32	13.1	11	16	27	14.4
41-50 students	19	11	30	12.2	12	9	21	11.2
51-60 students	12	12	24	9.8	6	5	11	5.9
61-70 students	2	4	6	2.5	6	2	8	4.3
Over 70 students	11	8	19	7.8	8	6	14	7.5
Total	121	125	246	100.0	89	98	187	100.0

[1] Exclusive of the medical school.

A condition almost as serious as that shown by the large number of small sections is that found in the practice of giving instruction in very large classes. The most serious condition in this respect is found in departments of biology, chemistry, English, history, economics, mathematics, and physics, all of which give instruction in classes of 100 students or over.

It will be observed that during the year 1916-17, before enrollments were affected by the war, the university conducted 45 classes with not more than 5 students and 74 classes with not more than 10 students. In other words, 30 per cent of the class sections enrolled not more than 10 students. Twenty-six out of 51 engineering courses given were given in classes of not more than 5 students and 38 in classes of not more than 10 students. In the 51 courses there was a gross registration of 434 students, or an average of 8.5 per course. A very large proportion of the small sections, therefore, are in engineering courses.

TABLE 72.—*Distribution of class sections at the Alabama Polytechnic Institute according to the number of students registered in each, 1916–17 and 1917–18.*

Size of sections.	Number of classes.									
	1916–17					1917–18				
	First term.	Second term.	Third term.	All terms.	Per cent of total.	First term.	Second term.	Third term.	All terms.	Per cent of total.
1–5 students	23	24	22	69	10.5	27	25	26	87	11.9
6–10 students	29	25	23	77	11.7	37	42	40	119	18.1
11–20 students	31	39	47	117	17.8	66	48	53	167	25.4
21–30 students	37	30	46	113	17.2	27	34	34	95	14.5
31–40 students	41	58	40	139	21.2	31	32	31	94	14.3
41–50 students	29	23	23	75	11.4	12	18	13	43	6.5
51–60 students	7	8	6	21	3.2	8	7	6	21	3.2
61–70 students	5	4	6	15	2.3	4	4	3	11	1.7
Over 70 students	11	11	9	31	4.7	10	11	8	29	4.4
Total	213	222	222	657	100.0	222	221	214	657	100.0

The Polytechnic Institute.—As shown in Table 72 the proportion of small sections at the Polytechnic Institute is somewhat smaller than at the university, but even here it is probably larger than it should be from the standpoint of economy. During the year 1916–17, 22 per cent of the classes were in sections of not more than 10. The smaller sections are distributed quite evenly among the several divisions. The most conspicuous department with respect to small sections is that of architecture in the division of engineering. The engineering division as a whole, however, shows that 59 sections out of a total of 126 failed to register more than 10 students. It should be noted that many of these small classes were composed of graduate students. Among the 126 classes in engineering there was a gross registration of 3,914, or an average of 31 students per section.

The most serious condition at this institution with regard to the size of sections is the number of sections with large registrations. For the year 1916–17 there were 31 sections each with over 70 students, and in 1917–18 there were 29 such sections. In several departments courses were given in classes of over 100 students.

The Girls' Technical Institute.—Table 73 shows the number of the classes with various registrations at the Girls' Technical Institute for the year 1918–19.

TABLE 73.—*Distribution of the number of class sections at the Alabama Girls' Technical Institute for the year 1918–19.*

Size of sections.	Number throughout the year	Per cent of total.	Size of sections.	Number throughout the year.	Per cent of total.
1–5	20	14.5	41–50	10	7.2
6–10	22	15.9	51–60	2	1.5
11–20	40	29.1	Over 60	....	....
21–30	26	18.8			
31–40	18	13.0	Total	138	100.0

Since the courses run through the whole session, it is necessary in making comparisons with the other institutions to multiply the number of sections by two in the case of the university and by three in the case of the Polytechnic Institute. The total number of sections here shown, however, may be compared with a single term of either of the other institutions. Of a total of 138 sections 42, or 30 per cent, represent registrations of not more than 10 students.

IV. COURSES OFFERED AND COURSES GIVEN.

It is customary among colleges and universities to offer several courses which are seldom or never given. Such a practice is justified if the offerings represent a conscientious attempt to anticipate the needs of students, and if the institution is in a position to support adequately the courses that are in constant demand. It should be regarded as the duty of the State to support instruction in courses for which there is a general demand and at the same time to provide for legitimate expansion in anticipation of the needs. The conditions with regard to the number of courses offered and the number given at the three higher institutions are shown in the following tabulated statement:

TABLE 74.—*Courses offered and courses given at the three higher institutions in Alabama for the year 1917–18.*

Departments.	University.[1]			Polytechnic Institute.			Girls' Technical Institute.		
	Courses offered.	Courses given.	Courses not given.	Courses offered.	Courses given.	Courses not given.	Courses offered.	Courses given.	Courses not given.
Biology	6	4	2	11	7	4	8	7	1
Chemistry	16	11	5	20	15	5	2	2	0
Economics	6	6	0	1	1	0			
English	16	16	0	27	10	17	6	4	2
Geology	6	5	1	9	7	2			
German	3	2	1	9	6	3			
Greek	4	1	3						
History	6	6	0	10	9	1	12	7	5
Latin	7	4	3	5	3	2	6	4	2
Mathematics	12	9	3	8	5	3	13	6	7
Physics	8	2	6	5	3	2	1	1	0
Political science	3	3	0						
Romance languages	5	5	0	9	7	2	5	5	0
Home economics	5	2	3				25	23	2
Education and psychology	19	11	8	39	12	27	10	7	3
Philosophy	3	2	1						
Civil engineering	15	5	10	21	16	5			
Drawing	7	6	1	15	12	3			
Electrical engineering	6	2	4	22	20	2			
Mechanical engineering	15	5	10	28	27	1			
Mining engineering	7	0	7	8	6	2			
Law	23	20	3						
Sociology							4	4	0
Commercial							8	7	1
Art							4	4	0
Music							21	10	11
Architecture				23	17	6			
Agronomy				13	11	2			
Agricultural engineering				3	1	2			
Horticulture				10	9	1			
Animal husbandry				14	13	1			
Pharmacy	2	2	0	14	13	1			
Veterinary medicine				25	24	1			
Total	200	129	71	249	254	95	125	91	34

[1] Courses in medicine not included.

The data presented in the above table may be summarized as follows:

Institution.	Courses offered.	Courses given.	Courses not given.	Percentage of courses not given.
University	200	129	71	35.5
Polytechnic Institute	349	254	95	27.2
Girls' Technical Institute	125	91	34	27.2
All institutions	674	474	200	29.7

Thus it appears that nearly 30 per cent of the courses offered by the three higher institutions in 1917–18 were not given. The proportion not given by the university amounts to 35.5 per cent and for each of the other two institutions 27.2 per cent. The failure to give some of these courses was probably due to the shrinkage of enrollment following the outbreak of the war. The figures for the uniuniversity do not include many courses listed but not offered for the year under consideration.

The committee commends the practice of the university in offering certain of the less popular courses in alternate years. The practice might well be extended to include many of the small enrollment courses now offered every year. The other institutions also would do well to adopt the practice for many of their less popular courses.

V. SALARIES OF FACULTY MEMBERS.

Quality of instruction is the chief factor in determining the success of any educational institution, and quality of instruction is dependent to a very large extent upon the salaries paid instructors. It is true that institutional attachment and other special considerations frequently hold instructors at lower salaries than they may obtain elsewhere, but the fact remains that teaching ability generally is subject to the law of supply and demand.

In only six States is the maximum salary of State university professors so low as that of the University of Alabama, which at present is $2,400 per year. Thirty-three State universities maintain a maximum in excess of this amount and among these the maximum ranges as high as $6,000. The conditions in the Polytechnic Institute, in comparison with other land-grant colleges, are similar to those prevailing at the university. In only five such institutions is the maximum salary so low, while in 26 cases a higher maximum is in force.

The maximum salary for deans in the university is $3,200 and in the Polytechnic Institute $3,000. Forty State-supported colleges and universities maintain a maximum salary for deans in excess of the larger figure offered by Alabama.

The university and Polytechnic Institute have been fortunate in retaining in service for many years a large proportion of their instructors. The Girls' Technical Institute, however, has not been so fortunate and the salary problem at the institution has reached a critical stage. The average annual salary there is barely more than $1,000; and, since it is a younger institution, it has not yet surrounded itself, as have the other institutions, with a large group of professors whose attachments to it are deep rooted. The fact that out of 36 faculty members listed in the 1917–18 catalogue only 19 are now connected with the institution is ample proof that the salary scale must be promptly raised if present standards are to be maintained.

The spirit of attachment and devotion is remarkably strong in the university and the Polytechnic Institute and it is a noteworthy fact that many of the instructors are serving at salaries much lower than could be obtained elsewhere. Solely from the viewpoint of justice to the individuals involved the State should be more liberal in the matter of salaries, but the State's chief concern is after all the maintenance of a sound educational policy. For this reason it must face the problem with a full realization that the law of supply and demand makes it necessary to pay salaries approximately equal to those of similar institutions in other States. No institution can depend indefinitely upon the spirit of devotion to maintain its standards of efficiency. New men must be employed to fill vacancies and to provide for developments, and men of the best qualifications are not easily attracted to institutions with low salary scales. The raising of salaries, therefore, should not be regarded by the State as disinterested benevolence to college instructors, but rather as a service to itself in the interests of efficiency.

VI. STANDARDS OF COLLEGE ENTRANCE REQUIREMENTS.

A characteristic feature of college admission standards in Alabama until recent years has been the lack of a well regulated scheme of articulation between the high schools and the State's higher institutions. For many years a dual standard of entrance requirements has existed, caused largely by the rivalry of the State University and the Polytechnic Institute. This rivalry has partially disappeared as a result of the establishment of the Association of Alabama Colleges, which includes, besides the university, nearly all of the leading privately endowed colleges of the State. This association, by a wise policy of affiliation with a large but selected group of State-inspected public high schools, has raised the State standard of college entrance requirements. The requirements now imposed by the members of the association coincide with those prescribed by the Association of Colleges and Secondary Schools of the Southern States.

The indirect result has been the raising of entrance standards at the Alabama Polytechnic Institute, whose requirements for entrance to regular collegiate work are now essentially on a par with those of the university. Nevertheless, the past policy of the Alabama Polytechnic Institute with respect to entrance standards and its present refusal to join the college association have subjected it to criticism, just or unjust, throughout the entire State.

The committee recognizes that the institute as a land-grant college is under obligations to admit a comparatively large group of students to special or noncollegiate courses, on a lower basis of entrance standards than is required for collegiate work. But the institute should so safeguard the entrance from these courses to the regular college courses that it may be under no suspicion of laxness in administering its collegiate standards. It should also so classify its students as to make their actual status unmistakably plain.

The committee urges that all State higher institutions come together on a common platform of college entrance standards such as that of the Alabama Association of Colleges. There is no excuse for even the appearance of a dual system of entrance requirements in the State of Alabama. As long as the present uncertainty as to the position of the Alabama Polytechnic Institute exists, the weaker high schools of the State will readily find an excuse for not reaching the standards agreed to by the leading higher institutions.

Another important aspect of this problem relates to the possibility of entrance to both institutions on 12 units of high school work. As long as students leave four-year high schools the year before graduation and enter directly upon their college work at a State institution it will be difficult for the local high schools to obtain the support necessary to maintain standards required in the fourth year. The State institutions of higher learning are competing with the fourth year of the high school.

From Table 75 it is evident that it is time for a more concerted action on the part of all institutions within the State, both public and private, in insisting that this type of student should remain at the four-year high school until he has completed at least 14 units.

Out of 341 students admitted to the University of Alabama in 1916–17, 15, or 4.3 per cent, were admitted with 12 units of preparation from standard four-year high schools of the State. The university also received seven students with 12 units from standard three-year high schools, or 1.7 per cent, making a total of 22 students admitted with 12 units, or about 6 per cent of the total number of entrants. Some of the endowed private institutions of the State unfortunately have accepted much larger numbers of 12-unit students from standard four-year high schools, as shown by the figures of the Birmingham College and the Athens College for Young Women. Out of 301 students admitted to the Alabama Polytechnic Institute in 1916–17, 23, or 7 per cent, were admitted with 12 units of preparation from four-year high schools; 9 students, approximately 3 per cent, were admitted from three-year high schools, making a total of about 10 per cent of the entire enrollment for 1916–17.

It is likely that the disturbed conditions brought about by the war account for the larger percentage of 12-unit students admitted by both institutions in 1917–18.

TABLE 75.—*Number of students entering college with 12 units from 3 year and 4 year high schools; including institutions of Alabama Association of Colleges, and Alabama Polytechnic Institute.*

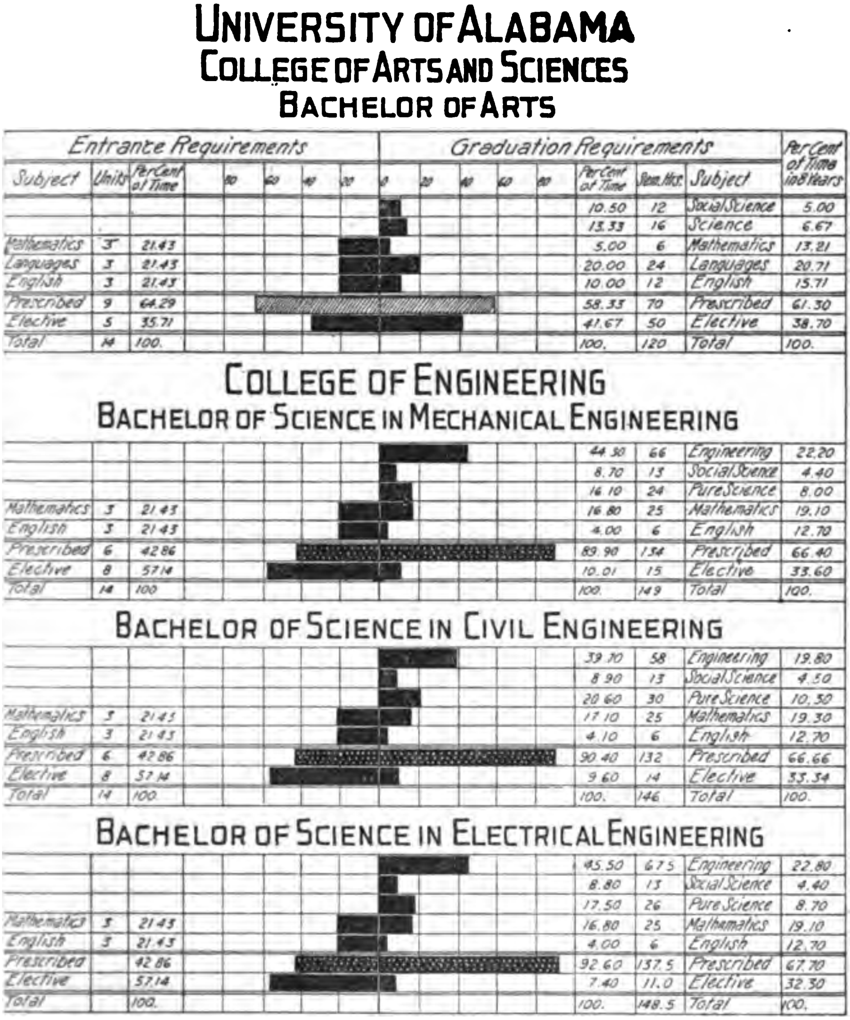
1916–17.

Institution.	Total number admitted.	Admitted with 12 units from standard 4-year high school.	Per cent.	Admitted with 12 units from standard 3-year high school.	Per cent.	Total admitted with 12 units.	Per cent.
Athens College for Young Women	22	4	18.1	2	10.0	6	28.0
Birmingham College	50	17	34.0	1	2.0	18	36.0
Howard College	86	8	9.3	3	3.5	11	12.0
Judson College	57	0	0	3	5.2	3	5.2
Southern University	51	3	5.8	0	0	3	5.8
Women's College of Alabama	113	5	4.4	3	2.6	8	7.0
UNIVERSITY OF ALABAMA	341	15	4.3	7	1.7	22	6.0
ALABAMA POLYTECHNIC INSTITUTE	301	23	7.0	9	2.9	32	10.0
Total	1,021	75	7.3	28	3.0	103	10.0
1917–18.							
Athens College for Young Women	24	1	4.1	1	4.1	2	8.0
Birmingham College	28	7	25.0	1	3.6	8	28.0
Howard College	63	8	12.6	0	0	8	12.0
Judson College	59	0	0	1	1.7	1	1.7
Southern University	35	3	8.5	0	0	3	9.0
Women's College of Alabama	47	6	12.0	0	0	6	13.0
UNIVERSITY OF ALABAMA	409	11	2.6	19	5.6	30	7.0
ALABAMA POLYTECHNIC INSTITUTE	298	32	11.0	8	2.7	40	13.0
Total	963	68	7.0	30	3.0	98	10.0

Some aspects of collegiate standards.—The study of the duplication of curricula in the two leading State higher institutions necessarily involves an investigation of the alleged competition between the bachelor of arts and the bachelor of science curricula of the State University and the bachelor of science curriculum—the general course—at the Alabama Polytechnic Institute. A careful study of the accompanying graphs shows that the alleged competition between these curricula is largely imaginary.

The A. B. and B. S. curricula at the university compare favorably in general content and quality with similar curricula in the leading higher institutions of the United States, it being clearly understood that the aims of these curricula are purely cultural.

The B. S. (general course) at Auburn is a curriculum *sui generis.* It approaches more nearly in content and quantity to the typical engineering course, except that it exceeds the average engineering course by at least 40 semester hours in total requirements, and likewise exceeds the A. B. and B. S. requirement in most universities by at least 60 semester hours. Aside from the work in history, the curriculum combines strongly professionalized courses in science with



UNIVERSITY OF ALABAMA
COLLEGE OF ARTS AND SCIENCES
BACHELOR OF ARTS

Entrante Requirements			Graduation Requirements			Per Cent of Time in 8 Years
Subject	Units	Per Cent of Time	Per Cent of Time	Sem. Hrs.	Subject	
			10.50	12	Social Science	5.00
			13.33	16	Science	6.67
Mathematics	3	21.43	5.00	6	Mathematics	13.21
Languages	3	21.43	20.00	24	Languages	20.71
English	3	21.43	10.00	12	English	15.71
Prescribed	9	64.29	58.33	70	Prescribed	61.30
Elective	5	35.71	41.67	50	Elective	38.70
Total	14	100.	100.	120	Total	100.

COLLEGE OF ENGINEERING
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

			44.90	66	Engineering	22.20
			8.70	13	Social Science	4.40
			16.10	24	Pure Science	8.00
Mathematics	3	21.43	16.80	25	Mathematics	19.10
English	3	21.43	4.00	6	English	12.70
Prescribed	6	42.86	89.90	134	Prescribed	66.40
Elective	8	57.14	10.01	15	Elective	33.60
Total	14	100	100.	149	Total	100.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

			39.70	58	Engineering	19.80
			8.90	13	Social Science	4.50
			20.60	30	Pure Science	10.50
Mathematics	3	21.43	17.10	25	Mathematics	19.30
English	3	21.43	4.10	6	English	12.70
Prescribed	6	42.86	90.40	132	Prescribed	66.66
Elective	8	57.14	9.60	14	Elective	33.34
Total	14	100.	100.	146	Total	100.

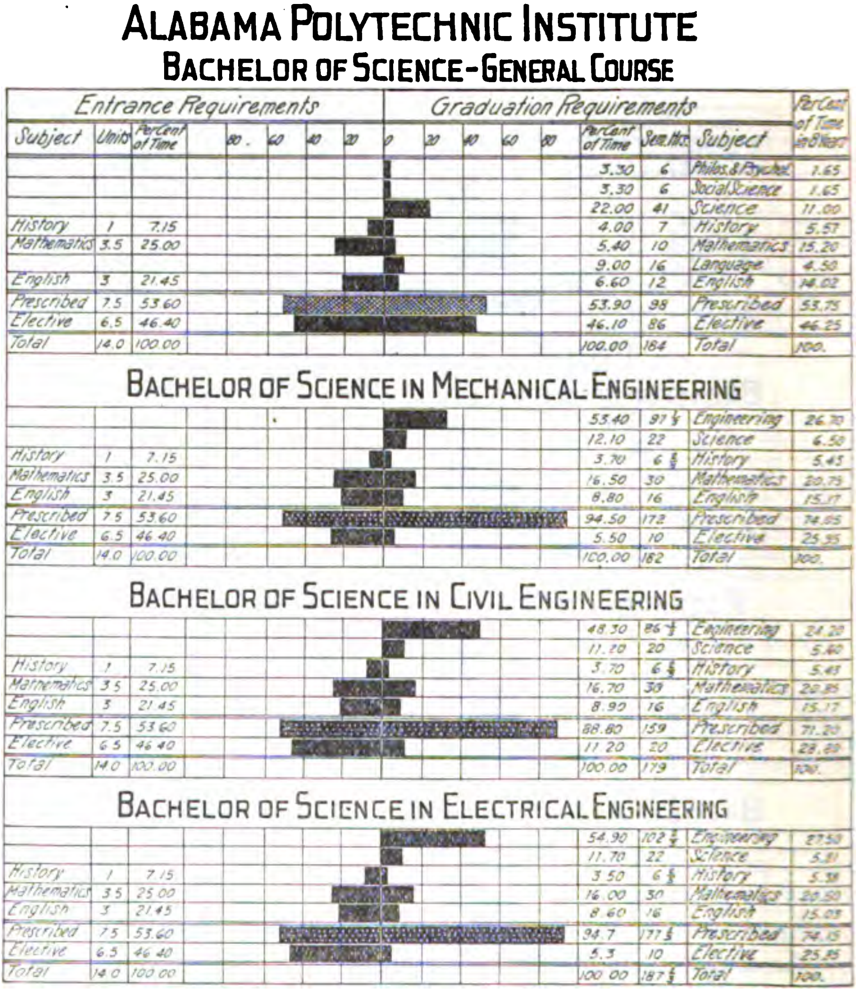
BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

			45.50	67.5	Engineering	22.80
			8.80	13	Social Science	4.40
			17.50	26	Pure Science	8.70
Mathematics	3	21.43	16.80	25	Mathematics	19.10
English	3	21.43	4.00	6	English	12.70
Prescribed		42.86	92.60	137.5	Prescribed	67.70
Elective		57.14	7.40	11.0	Elective	32.30
Total		100.	100.	148.5	Total	100.

FIG. 43.

large opportunities for election of subjects in the applied sciences such as agriculture and engineering.

The courses in engineering.—The committee has discovered evidence of the existence of the opinion that the courses or the curricula in engineering in the land-grant colleges are not of the same character as the courses and curricula in engineering in the State universities or in privately endowed institutions. This is an old superstition. Figures 43 and 44 clearly indicate that the degree curricula in engineering at Auburn are fundamentally equivalent in content and more than equivalent in quantity to the degree curricula in engineering at the university.



ALABAMA POLYTECHNIC INSTITUTE

BACHELOR OF SCIENCE-GENERAL COURSE

Entrance Requirements			Graduation Requirements			
Subject	Units	Per Cent of Time	Per Cent of Time	Sem. Hrs.	Subject	Per Cent of Time in 8 Years
			3.30	6	Philos. & Psychol.	1.65
			3.30	6	Social Science	1.65
			22.00	41	Science	11.00
History	1	7.15	4.00	7	History	5.57
Mathematics	3.5	25.00	5.40	10	Mathematics	15.20
			9.00	16	Language	4.50
English	3	21.45	6.60	12	English	14.02
Prescribed	7.5	53.60	53.90	98	Prescribed	53.75
Elective	6.5	46.40	46.10	86	Elective	46.25
Total	14.0	100.00	100.00	184	Total	100.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Subject	Units	Per Cent of Time	Per Cent of Time	Sem. Hrs.	Subject	Per Cent of Time in 8 Years
			53.40	97⅓	Engineering	26.70
			12.10	22	Science	6.50
History	1	7.15	3.70	6⅔	History	5.45
Mathematics	3.5	25.00	16.50	30	Mathematics	20.75
English	3	21.45	8.80	16	English	15.17
Prescribed	7.5	53.60	94.50	172	Prescribed	74.05
Elective	6.5	46.40	5.50	10	Elective	25.95
Total	14.0	100.00	100.00	182	Total	100.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

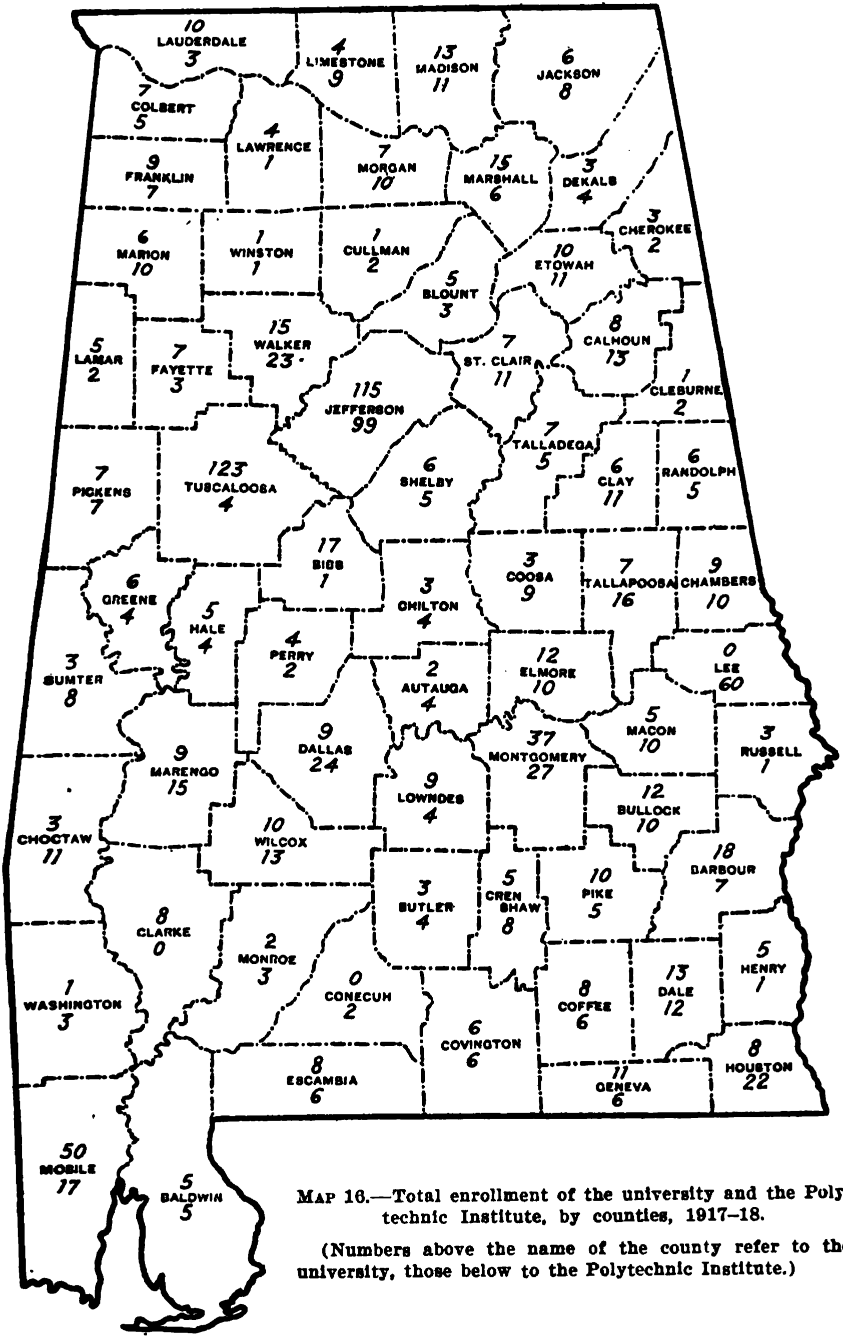
Subject	Units	Per Cent of Time	Per Cent of Time	Sem. Hrs.	Subject	Per Cent of Time in 8 Years
			48.30	86⅓	Engineering	24.20
			11.20	20	Science	5.60
History	1	7.15	3.70	6⅔	History	5.43
Mathematics	3.5	25.00	16.70	30	Mathematics	20.85
English	3	21.45	8.90	16	English	15.17
Prescribed	7.5	53.60	88.80	159	Prescribed	71.20
Elective	6.5	46.40	11.20	20	Elective	28.80
Total	14.0	100.00	100.00	179	Total	100.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Subject	Units	Per Cent of Time	Per Cent of Time	Sem. Hrs.	Subject	Per Cent of Time in 8 Years
			54.90	102⅔	Engineering	27.50
			11.70	22	Science	5.81
History	1	7.15	3.50	6⅔	History	5.38
Mathematics	3.5	25.00	16.00	30	Mathematics	20.50
English	3	21.45	8.60	16	English	15.03
Prescribed	7.5	53.60	94.7	177⅓	Prescribed	74.15
Elective	6.5	46.40	5.3	10	Elective	25.85
Total	14.0	100.00	100.00	187⅓	Total	100.

FIG. 44.

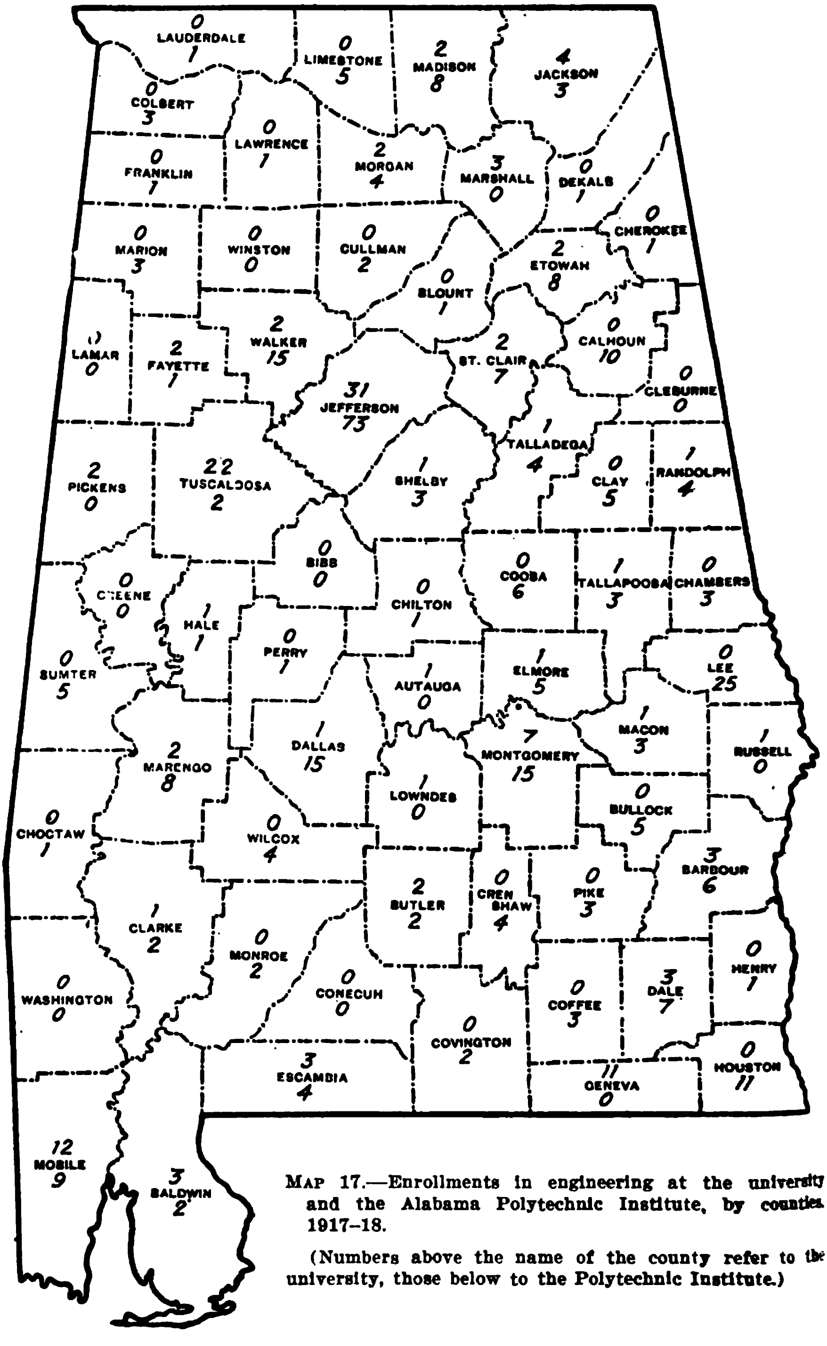
The reader's attention is called to the enrollments in Tuscaloosa, Jefferson, Dallas, Montgomery, Lee, and Mobile Counties.



MAP 16.—Total enrollment of the university and the Polytechnic Institute, by counties, 1917–18.

(Numbers above the name of the county refer to the university, those below to the Polytechnic Institute.)

Attention is called to the engineering enrollments in Tuscaloosa, Jefferson, Dallas, Montgomery, Lee, and Mobile Counties.



MAP 17.—Enrollments in engineering at the university and the Alabama Polytechnic Institute, by counties, 1917–18.

(Numbers above the name of the county refer to the university, those below to the Polytechnic Institute.)

Chapter XXII.

STATE SUPPORT OF HIGHER EDUCATION.

COMPARISON OF ALABAMA WITH OTHER STATES.

In 1913, Alabama ranked twenty-third among the States with respect to the amount expended for higher education for each $1,000 of wealth. The amount was 65 cents, according to Table 76. The following Southern States exceeded that figure: Tennessee spent 80 cents; Mississippi, 87 cents; North Carolina, 94 cents; South Carolina, $1.21; and Virginia, $1.30. The last-named State spent 110 per cent more than the corresponding expenditure made by Alabama.

TABLE 76.—*Amount expended for higher education for each $1,000 of wealth in order of rank, by States, 1913–14.*

1.	Delaware	$3.88
2.	New Hampshire	1.84
3.	Massachusetts	1.47
4.	Virginia	1.37
5.	Wisconsin	1.27
6.	Connecticut	1.25
7.	Arizona	1.23
8.	South Carolina	1.21
9.	Maryland	.95
10.	North Carolina	.94
11.	Maine	.92
12.	Mississippi	.87
13.	Tennessee	.80
14.	Minnesota	.79
15.	New York	.74
16.	Michigan	.73
17.	South Dakota	.72
18.	Idaho	.71
19.	Utah	.70
20.	California	.68
21.	Illinois	.68
22.	Oregon	.67
23.	ALABAMA	.65
24.	Washington	.64
25.	North Dakota	.61
26.	Georgia	$0.61
27.	Vermont	.60
28.	New Mexico	.60
29.	Ohio	.56
30.	Rhode Island	.56
31.	Wyoming	.56
32.	Louisiana	.55
33.	Pennsylvania	.54
34.	Kansas	.53
35.	Iowa	.51
36.	Nebraska	.51
37.	Kentucky	.50
38.	Colorado	.50
39.	Texas	.49
40.	Montana	.48
41.	Nevada	.47
42.	Florida	.44
43.	Indiana	.42
44.	Missouri	.42
45.	West Virginia	.39
46.	New Jersey	.39
47.	Arkansas	.30
48.	Oklahoma	.19
	Average for United States	.78

The average expenditure of the 48 States of the Union was 78 cents for each $1,000 of wealth. The average of the following group of

Southern States—Virginia, South Carolina, North Carolina, Mississippi, Tennessee, Alabama, Georgia, Louisiana, Florida, and Texas—was 79 cents. Alabama suffers in both comparisons.

Per capita receipts of higher institutions.—According to Table 77, Alabama ranked forty-fourth among the States in 1913 with respect to the apportionment of the receipts of higher institutions per capita among the population. Its higher institutions received 57 cents per capita of the population. Florida, Mississippi, Tennessee, Louisiana, North Carolina, Texas, South Carolina, and Virginia surpassed Alabama to the extent of from 5 to 155 per cent. The per capita apportionment in Virginia was $1.45. Compared with the average apportionment of all the States in the Union—$3.22, or the median, $1.65—the showing of Alabama is very poor.

TABLE 77.—*Rank of States as to per capita receipts of higher educational institutions, including normal schools, 1913–14.*

1. Delaware	$5.65
2. Arizona	2.94
3. New Hampshire	2.62
4. Nevada	2.53
5. Massachusetts	2.51
6. Connecticut	2.43
7. Wisconsin	2.33
8. California	2.30
9. North Dakota	2.17
10. Minnesota	1.99
11. Oregon	1.83
12. New York	1.77
13. Illinois	1.76
14. Iowa	1.71
15. Washington	1.71
16. South Dakota	1.64
17. Nebraska	1.54
18. Maryland	1.46
19. Virginia	1.45
20. Montana	1.44
21. Colorado	1.43
22. Kansas	1.38
23. Utah	1.38
24. Vermont	1.35
25. Michigan	1.35
26. Wyoming	$1.32
27. Idaho	1.27
28. Maine	1.27
29. South Carolina	1.04
30. Ohio	1.01
31. Pennsylvania	1.00
32. Rhode Island	.93
33. New Mexico	.92
34. Texas	.83
35. New Jersey	.81
36. Indiana	.77
37. North Carolina	.75
38. West Virginia	.71
39. Missouri	.70
40. Louisiana	.68
41. Tennessee	.67
42. Mississippi	.63
43. Florida	.60
44. ALABAMA	.57
45. Georgia	.54
46. Oklahoma	.51
47. Kentucky	.47
48. Arkansas	.33
Average for United States	3.22

The Bureau of Education is aware that the data upon which these observations are founded are somewhat antiquated. Later data just collected give fair evidence that similar tabulations for the year 1918, which are now in preparation, will vary but slightly from those here presented, leaving the State of Alabama in relatively the same position. The expenditures for all the higher institutions, public and private, within the several States are covered in the foregoing tables. The expenditures for normal schools are also included.

In Tables 78 and 79 which follow, similar data are presented with respect to the State collegiate institutions, excluding normal schools. These figures are for the year 1918.

TABLE 78.—*Amount expended for State-supported higher education for each $1,000 of wealth, by States, 1918, excluding normal schools.*

1.	Wyoming	$0.82	26.	Indiana	$0.32
2.	Arizona	.78	27.	Texas	.32
3.	Idaho	.74	28.	Virginia	.31
4.	New Mexico	.69	29.	Maine	.29
5.	Utah	.69	30.	Iowa	.28
6.	South Dakota	.56	31.	North Carolina	.28
7.	Michigan	.53	32.	Ohio	.25
8.	Montana	.53	33.	Georgia	.22
9.	Tennessee	.53	34.	Kentucky	.22
10.	Delaware	.51	35.	North Dakota	.22
11.	Vermont	.50	36.	Oklahoma	.21
12.	Wisconsin	.48	37.	West Virginia	.20
13.	New Hampshire	.46	38.	ALABAMA	.17
14.	Nevada	.43	39.	Connecticut	.15
15.	Colorado	.39	40.	Illinois	.15
16.	Minnesota	.38	41.	Maryland	.15
17.	Mississippi	.37	42.	Missouri	.15
18.	Oregon	.37	43.	Arkansas	.14
19.	South Carolina	.37	44.	Rhode Island	.14
20.	Massachusetts	.34	45.	New York	.10
21.	Florida	.33	46.	New Jersey	.06
22.	Kansas	.33	47.	Pennsylvania	.06
23.	Nebraska	.33	48.	Louisiana	.05
24.	Washington	.33			
25.	California	.32		Average for United States	.36

According to Table 78, the position of Alabama is again exceedingly low. It ranks thirty-eighth. The expenditure for the university, the Polytechnic Institute, and Montevallo was only 17 cents for each $1,000 of State wealth. Nine Southern States have exceeded this expenditure, conspicuous among them being Virginia with 31 cents; Mississippi, 37 cents; and Tennessee, 53 cents. If comparison be made with the leading States in other sections of the United States the position of Alabama suffers accordingly. It should be explained that one of the principal reasons for the relatively low position of Connecticut, Illinois, Maryland, Rhode Island, New York, Missouri, New Jersey, and Pennsylvania in this table is that these States are the seats of a large number of very wealthy privately endowed institutions, many of which were well established before the formation of the States. In most of these States it will be found that the State-supported higher institutions are, on the whole, receiving a great deal more money than the State-supported institutions of Alabama. Compared with the average of 34 cents for all the States of the Union, Alabama is giving just 50 per cent less, or 17 cents. The group of Southern States previously mentioned expended, in 1918, 29 cents or 41 per cent more than Alabama.

TABLE 79.—*Rank of States as to per capita receipts of higher educational institutions supported by the State, normal schools not included.*

Rank	State	Amount
1.	Nevada	$2.43
2.	Arizona	1.90
3.	Wyoming	1.62
4.	Montana	1.60
5.	Utah	1.55
6.	South Dakota	1.52
7.	Iowa	1.38
8.	Idaho	1.33
9.	Nebraska	1.33
10.	Colorado	1.28
11.	California	1.21
12.	Michigan	1.20
13.	Minnesota	1.20
14.	Oregon	1.19
15.	Kansas	1.14
16.	Wisconsin	1.08
17.	New Mexico	1.04
18.	Washington	.99
19.	North Dakota	.92
20.	Vermont	.89
21.	Delaware	.87
22.	New Hampshire	.77
23.	Texas	.70
24.	Indiana	.68
25.	Oklahoma	.66
26.	Massachusetts	.65
27.	Tennessee	$0.58
28.	Florida	.55
29.	Ohio	.53
30.	Illinois	.48
31.	Maine	.48
32.	West Virginia	.48
33.	South Carolina	.43
34.	Virginia	.43
35.	Connecticut	.35
36.	Mississippi	.34
37.	Missouri	.33
38.	Maryland	.30
39.	New York	.29
40.	North Carolina	.29
41.	Kentucky	.26
42.	Rhode Island	.25
43.	Georgia	.24
44.	ALABAMA	.21
45.	Arkansas	.20
46.	New Jersey	.15
47.	Pennsylvania	.12
48.	Louisiana	.09
	Average for the United States	.80

NOTE.—In Tables 76 to 79, the amounts appropriated for buildings and permanent improvements are included.

The apportionment per capita of the receipts of State higher institutions for 1918 is given in Table 79. Alabama again ranks very low, being forty-fourth, with a per capita apportionment of only 21 cents. The Southern States which surpass Alabama in this respect are Georgia with 24 cents per capita of the population, Kentucky with 26 cents, North Carolina with 29 cents, Mississippi with 34 cents, Virginia and South Carolina each with 43 cents, Florida with 55 cents, Tennessee with 58 cents, and Texas with 70 cents. Alabama surpasses only Arkansas and Louisiana in the South, although it should be borne in mind that Louisiana, relatively poor as her showing is, supports indirectly Tulane University, a large privately endowed institution, in addition to the State university. New Jersey and Pennsylvania show smaller per capita receipts for the State supported higher institutions, but this apparent deficiency is offset by the very generous support given the many privately endowed universities and colleges of these States.

Analysis of the property and income of State-supported institutions of higher education in certain States.—The property and income of State-supported universities and colleges in Nevada, Arizona, South Dakota, Florida, Washington, South Carolina, Louisiana, Mississippi, Virginia, Iowa, Tennessee, Minnesota, North Carolina, Georgia, California, and Texas will now be discussed. The situation in Alabama will be compared with that in these States.

This group has been selected because it includes the most comparable Southern States. It includes typical States of the North and West. It also includes those States whose institutions of higher learning have been surveyed by the Bureau of Education. The bureau's studies relate to Arizona, Washington, Iowa, and South Dakota.

Tables 81 to 84 and figure 45 show the property of State higher institutions of learning, also the income from the State, the income from the United States, the income from all other sources, and the total income. From these tables appropriations for buildings and permanent improvements have been excluded. The tables give the 17 States according to rank of population. The data are compiled for the years 1910, 1917, and 1918, the average of the last two years mentioned being given also.

The proportion of white and colored population in these States is given in Table 80, in order to facilitate comparison between the white populations of the various States. With respect to total population, Alabama may be consistently compared with Georgia, North Carolina, Minnesota, Tennessee, Iowa, and Virginia. With respect to white population only, Alabama may be compared with Georgia, North Carolina, Tennessee, Virginia, Washington, and Mississippi.

TABLE 80.—*Rank in total population of the 17 States discussed in this survey, including population of whites and Negroes.*

States in rank of population.	Per cent white.	Per cent not white.	White.	Colored.	Total population, Jan. 1, 1918.
1. Texas	82	18	3,751,523	806,828	4,558,351
2. California	95	....	2,920,511	153,712	3,074,223
3. Georgia	55	45	1,601,736	1,313,994	2,915,730
4. North Carolina	68	32	1,666,139	784,064	2,450,203
5. ALABAMA	57	42	1,356,374	1,023,231	2,379,605
6. Minnesota	99	....	2,310,236	18,360	2,328,866
7. Tennessee	78	22	1,811,033	501,908	1,286,128
8. Iowa	99	....	2,209,397	15,347	2,224,771
9. Virginia	67	33	1,498,659	724,868	2,223,527
10. Mississippi	44	56	869,200	1,019,818	1,989,018
11. Louisiana	57	43	1,064,523	806,343	1,870,866
12. South Carolina	45	55	740,126	911,801	1,652,069
13. Washington	97	....	1,581,747	47,242	1,628,989
14. Florida	59	41	547,243	380,289	927,532
15. South Dakota	97	....	701,512	24,691	726,203
16. Arizona	83	14	222,366	45,546	267,912
17. Nevada	91	....	101,955	10,785	112,740

ing the years 1917 and 1918. Compared with Iowa and California, the income given the higher institutions by the State of Alabama is insignificant. It is not more than 8 per cent of that which is granted by the State of Iowa, and about 10 per cent of that which is granted by the State of California. Five of the leading Southern States, two of which are contiguous to Alabama, granted nearly double the amount of support to State institutions of higher learning in the same years.

We will next consider support given by the United States to institutions of higher learning in the same group of 17 States.

TABLE 82.—*Amount of United States support to State higher institutions of learning.*

State in rank of population.	1910	State in rank of population.	Average for years 1917 and 1918.
1. Arizona	$75,000	1. Texas	$188,439
2. Nevada	45,000	2. Iowa	148,209
3. South Dakota	75,000	3. South Carolina	130,525
4. Washington	75,000	4. Tennessee	126,702
5. Iowa	75,000	5. North Carolina	126,048
6. Tennessee	75,000	6. Minnesota	123,828
7. California	75,000	7. Virginia	118,695
8. Minnesota	75,000	8. ALABAMA	116,535
9. Texas	68,750	9. California	114,834
10. North Carolina	60,150	10. Washington	104,073
11. Virginia	60,000	11. South Dakota	103,875
12. Louisiana	54,917	12. Mississippi	101,222
13. ALABAMA	54,628	13. Louisiana	100,585
14. Mississippi	52,820	14. Georgia	99,973
15. Florida	52,500	15. Arizona	93,839
16. South Carolina	52,400	16. Nevada	92,847
17. Georgia	30,000	17. Florida	79,586

According to Table 82, Alabama ranked thirtieth in 1910, having received $54,628 from the Federal Government. In the years 1917 and 1918 the State received on an average more than double the amount received in 1910. Its relative rank had advanced from thirteenth to eighth. This is due primarily to the progressive increase of the Federal funds since 1914. In that respect Alabama institutions show a gain in support from the Federal Government which stands in favorable contrast to the relative decline of State support during the same period.

The third source of income includes that received elsewhere than from the State or the United States. An income of this character can not be expected to show the same stability as may be expected of the income received from public sources. Nevertheless, the interest that the public has in State institutions may be gauged considerably by the amount which is obtained through private benefactions, alumni associations, and the like. According to Table 83, Alabama, in 1910, received $143,972 from various sources. Its rank in the group of 17

States was sixth. Alabama was surpassed by Texas, with $230,370, and by Virginia with $303,872, as well as by three northern States.

TABLE 83.—*Income of State institutions of higher learning from sources other than the State and the United States.*

States in rank of population.	1910	States in rank of population.	Average for years 1917–18.
1. California	$566,072	1. California	$1,245,000
2. Iowa	397,744	2. Texas	1,126,682
3. Virginia	303,872	3. Iowa	867,738
4. Minnesota	263,138	4. Minnesota	746,270
5. Texas	230,370	5. Virginia	565,973
6. ALABAMA	143,972	6. Washington	396,449
7. North Carolina	136,096	7. Mississippi	293,309
8. Mississippi	132,086	8. ALABAMA	188,258
9. Washington	111,509	9. South Dakota	169,220
10. Tennessee	96,384	10. North Carolina	158,852
11. South Dakota	94,562	11. Arizona	121,734
12. Georgia	77,956	12. Louisiana	121,134
13. South Carolina	47,767	13. Tennessee	106,105
14. Louisiana	36,540	14. Gerogia	90,065
15. Florida	22,920	15. South Carolina	70,721
16. Nevada	13,536	16. Florida	67,324
17. Arizona	10,998	17. Nevada	36,948

Notwithstanding the relatively good position of Alabama in this respect during 1910 there has been in succeeding years a considerable falling off in the income received from "other sources." The State in 1917 and 1918 ranked eighth in the list of 17 States with respect to such income. In the years 1917 and 1918 Alabama institutions averaged $188,258 from other sources, being surpassed by those of Mississippi with $293,309; by those of Virginia with $565,973; and by those of Texas with $1,126,682, as well as by those of four Northern States. It is evident that the interest of the citizens of Alabama in the higher institutions of the State as expressed through private benefactions has not grown to the extent that it has in many other States. Although there has been a slight increase in income from "other sources" during the period between 1910 and 1918, nevertheless, it has been very insignificant compared with the increase shown in Mississippi, Washington, Iowa, Texas, and California.

If the entire income of the State higher institutions is considered by States, excluding the appropriations for buildings and permanent improvements, we find, according to Table 84, that for the years 1917 and 1918 Alabama stood twelfth in the list of 17 States, being surpassed by Georgia, South Carolina, North Carolina, Mississippi, Virginia, and Texas of the Southern States, and by South Dakota, Washington, Minnesota, California, and Iowa of the North and West.

TABLE 84.—*Average total income for years 1917–18.*

1.	Iowa	$3,136,360
2.	California	3,180,221
3.	Texas	2,922,109
4.	Minnnesota	2,479,216
5.	Washington	1,473,406
6.	Virginia	1,016,418
7.	Mississippi	728,513
8.	South Dakota	622,445
9.	North Carolina	609,853
10.	South Carolina	586,277
11.	Georgia	559,329
12.	ALABAMA	475,075
13.	Arizona	424,700
14.	Louisiana	388,816
15.	Tennesee	363,450
16.	Florida	340,624
17.	Nevada	268,740

The institutions of the neighboring State of Mississippi received nearly 75 per cent more, those of Virginia considerably over twice as much, while those of Texas received during the same period nearly six times as much.

The question of support of State institutions may properly be treated by institutions as well as by States. According to Table 85 there are 14 State universities in the group of 17 States which have been used for comparisons. The average annual income of these State universities from 1913 to 1918 was as follows:

TABLE 85.—*Average total income of State universities in the 17 States compared.*

1.	University of California	$3,373,485
2.	University of Minnesota	2,645,169
3.	Iowa State University	1,240,780
4.	University of Washington	732,667
5.	University of Tennessee	517,951
6.	University of Virginia	444,143
7.	University of Arizona	392,968
8.	University of Georgia	348,882
9.	Louisiana State University	288,505
10.	University of Nevada	258,468
11.	University of Florida	186,961
12.	UNIVERSITY OF ALABAMA	187,169
13.	University of South Carolina	139,920
14.	University of Mississippi	139,881

According to this table the University of Alabama ranks twelfth. Attention is called to the fact that in Tables 85 and 86 the appropriations for buildings and other permanent improvements are included.

The income of the independent land-grant colleges in these same States was as follows:

TABLE 86.—*Average total income of land-grant colleges in the 17 States compared.*

1. Iowa State College	$1,479,832
2. Washington State College	592,862
3. Agricultural and Mechanical College of Mississippi	480,855
4. Virginia Polytechnic Institute	389,968
5. Clemson Agricultural College	362,475
6. ALABAMA POLYTECHNIC INSTITUTE	255,094
7. Georgia School of Technology	222,019

PERCENT INCREASE DURING THE PAST 10 YEARS IN STUDENT ENROLLMENT, TEACHING FORCE, AND INCOME FROM STATE AND PRODUCTIVE FUNDS; APPROPRIATIONS FOR BUILDINGS EXCLUDED.

UNIVERSITY OF ALABAMA

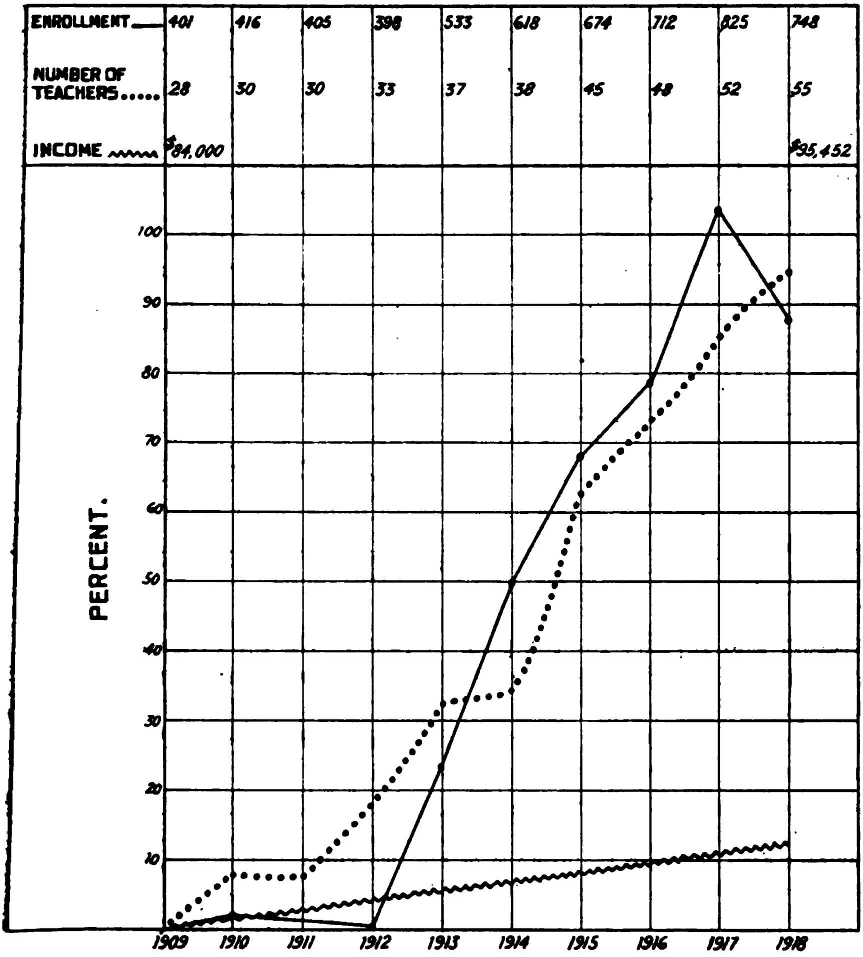


FIG. 46.

In this group of seven institutions, Alabama Polytechnic Institute ranks sixth in the amount of support from all sources, surpassing on the Georgia School of Technology. The comparison is not entirely fair, owing to the fact that the University of Georgia includes the college of agriculture and receives the $50,000 of the Federal land-grant fund.

Increase of State support of higher education.—Perhaps the most striking evidence of the inadequacy of State support for State higher educational institutions is found in the accompanying figures. According to figures 46 and 47 the student enrollment and teaching force of the university and of the Polytechnic Institute has increased steadily and rapidly for the past 10 years. On the other hand, the income from the State has not increased either so rapidly or so constantly.

PERCENT INCREASE DURING THE PAST 10 YEARS IN STUDENT ENROLLMENT, TEACHING FORCE, AND INCOME FROM THE STATE AND PRODUCTIVE FUNDS, APPRORRIATIONS FOR BUILDINGS EXCLUDED.

ALABAMA POLYTECHNIC INSTITUTE

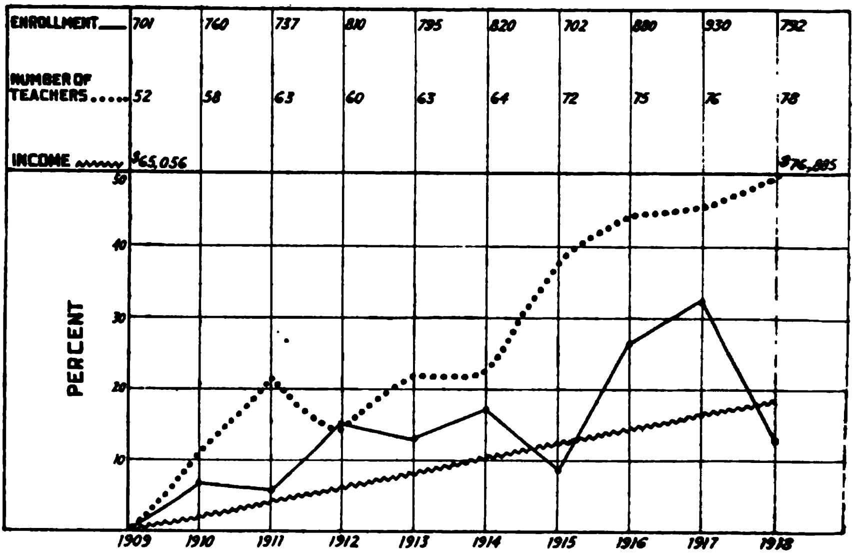


FIG. 47.

The same conditions hold true for the Alabama Girls' Technical Institute, as is shown by the following figures:

	Per cent.
Increase of students from 1908 to 1917	57
Increase of students from 1908 to 1918	37
Per cent gain based on the average of the two years	47
Increase of teachers from 1908 to 1917	21
Increase of teachers from 1908 to 1918	28
Per cent gain based on the average of the two years	24
Increase in State support from 1908 to 1918	12

(Income from State has been practically stationary for past three years.)

Instructional costs at Alabama State higher institutions.—Since 1915 the Bureau of Education has ascertained the per capita cost of instruction in the State higher institutions of Washington, Iowa, Nevada, Arizona, and South Dakota. These costs may properly be compared with those of the Alabama State institutions.

In Table 87 the per capita costs of instruction in the institutions surveyed by the Bureau of Education are given in minimum-maximum order, the figures being in most cases for two successive years.

TABLE 87.—*Per capita costs of instruction in the institutions surveyed by the Bureau of Education, in minimum-maximum order.*

1.	ALABAMA GIRLS' TECHNICAL INSTITUTE, 1916–17	$103.54
2.	ALABAMA POLYTECHNIC INSTITUTE, 1916–17	140.19
3.	ALABAMA POLYTECHNIC INSTITUTE, 1917–18	153.86
4.	UNIVERSITY OF ALABAMA, 1916–17	155.09
5.	ALABAMA GIRLS' TECHNICAL INSTITUTE, 1917–18	164.74
6.	Iowa State Teachers' College, 1913–14	168.00
7.	Iowa State Teachers' College, 1914–15	170.00
8.	UNIVERSITY OF ALABAMA, 1917–18	188.80
9.	Washington State University, 1914–15	192.77
10.	Washington State University, 1913–14	223.49
11.	South Dakota State University, 1916–17	241.29
12.	Iowa State College, 1913–14	270.00
13.	Iowa State College, 1914–15	271.00
14.	South Dakota State University, 1915–16	271.30
15.	Iowa State University, 1914–15	274.50
16.	Iowa State University, 1913–14	275.00
17.	Washington State College, 1914–15	289.79
18.	South Dakota State School of Mines, 1916–17	350.12
19.	Washington State College, 1913–14	358.37
20.	Arizona State University, 1915–16	400.78
21.	South Dakota State College, 1915–16	441.21
22.	Nevada State University, 1914–15	443.18
23.	South Dakota State College, 1916–17	468.35
24.	Nevada State University, 1915–16	522.77
25.	South Dakota State School of Mines, 1915–16	564.32

In Table 88 the same data are tabulated for the average of the two years included in the survey.

TABLE 88.—*The per capita costs based on the average of the two years included in each survey.*

1.	Alabama Girls' Technical Institute, 1916–1918	$134.14
2.	Alabama Polytechnic Institute, 1916–1918	147.02
3.	Iowa State Teachers' College, 1913–1915	169.00
4.	University of Alabama, 1916–1918	170.69
5.	Washington State University, 1913–1915	208.13
6.	South Dakota State University, 1915–1917	256.29
7.	Iowa State College, 1913–1915	270.50
8.	Iowa State University, 1913–1915	274.75
9.	Washington State College, 1913–1915	324.08
10.	Arizona State University, 1915–16	[1] 400.73
11.	South Dakota State College, 1915–1917	454.78
12.	South Dakota State School of Mines, 1915–1917	457.22
13.	Nevada State University, 1914–1916	482.97

Table 89 gives in detail the enrollment, average attendance, total operating expenses, excluding those of the summer school, and the cost per student based on the average for two successive years.

TABLE 89.—*Comparative table of the per capita cost of higher education in the States of Washington, Iowa, Nevada, Arizona, South Dakota, and Alabama.*

	Washington.		Iowa.			Nevada State University.	Arizona State University.
	State University.	State College.	State University.	State College.	Teachers' College.		
	1913-14		1913-14			1914-15	1915-16
Number of students enrolled the first semester.	2,263	947	2,343	2,292	[2]1,297 1,348	310	403
Number of students enrolled the second semester	2,373	972	2,235	2,207	1,245	316	....
Total enrollment	4,636	1,919	4,580	4,559	3,926	626	....
Average attendance for the year	2,318	959.5	2,290	2,279	1,308	313	[3] 413
Total operating expenses excluding summer school	$517,505	$343,865	$629,069.24	$616,654.33	$220,018.22	$138,717.96	$165,510.90
Cost per student of average attendance	$223.49	$358.37	$275.00	$270.00	$168.00	$443.18	$400.73
	1914-15		1914-15			1915-16	
Number of students enrolled first semester	2,724	1,013	2,416	2,522	[2] 1,406 1,485	328	....
Number of students enrolled second semester	2,645	956	2,303	2,467	1,366	331	....
Total enrollment	5,369	1,969	4,719	4,989	4,257	659	....
Average attendance for the year	2,684.5	984.5	2,360	2,495	1,419	329.5	....
Total operating expenses excluding summer school	$517,505	$285,299	$648,195	$677,146.68	$241,007.52	$172,254.23	....
Cost per student of average attendance	$192.77	$289.79	$274.50	$271.00	$170.00	$522.77	....

[1] Arizona includes one year's report only.

[2] Terms.

[3] Estimate of registrar.

TABLE 89.—*Comparative table of the per capita cost of higher education in the States of Washington, Iowa, Nevada, Arizona, South Dakota, and Alabama*—Continued.

	South Dakota.			Alabama.		
	State University.	State College.	School of Mines.	State University.	Polytechnic Institute.	Girls Polytechnic Institute.
	1915-16			1916-17		
Number of students enrolled the first semester	558	....	67	....	....	....
Number of students enrolled the second semester	[1] 505	....	62	....	....	....
Total enrollment	1,063	....	129	....	931	566
Average attendance for the year	531	358	65	731	850	491
Total operating expenses excluding summer school	$144,078.07	$158,955.00	$36,680.51	$113,369.17	$119,159.69	$49,801.31
Cost per student of average attendance	$271.30	$441.21	$564.32	$155.09	$140.19	$103.54
	1916-17			1917-18		
Number of students enrolled first semester	631	....	116	....	....	....
Number of students enrolled second semester	622	....	78	....	....	....
Total enrollment	1,253	....	194	....	792	491
Average attendance for the year	626	365	97	622	715	416
Total operating expenses, excluding summer school	$151,059.00	$170,947.71	$33,961.57	$115,878.02	$110,010.47	$68,537.32
Cost per student of average attendance	$241.29	$468.35	$350.12	$186.30	$153.86	$164.74

[1] Terms.

Basis of comparing costs.—Previous investigations by the bureau have led to the conclusion that before the war a per capita cost of $275 represented a fair estimate for a State university. It was assumed that the per capita cost of a State agricultural and mechanical college would exceed this figure owing to the larger outlay required for maintaining the extensive laboratory and farm equipment.

Present costs of Alabama State institutions compared with prewar costs of State higher institutions of Washington, Nevada, Iowa, Arizona, and South Dakota.—Using Table 88 for this comparison, we find that the per capita costs of the Alabama Polytechnic Institute and the Alabama Girls' Technical Institute are the lowest of the 13 institutions compared. The costs of the University of Alabama are lower with one exception than those of any other institution listed in the table, excluding the two other institutions from Alabama. The per capita cost at the Alabama Girls' Technical Institute, 1916–1918, was 49 per cent of the per capita cost at the Iowa State University for 1913–1915. The per capita cost at Alabama Polytechnic

Institute was 53 per cent and that at the University of Alabama was 65 per cent of the per capita cost at the Iowa State University.

If the per capita costs in Alabama were compared with the 1918 estimates of per capita cost for a university of recognized standards the comparison would be still more unfavorable. Recent inquiries show that the expenses involved in providing higher education have increased anywhere from 30 to 50 per cent throughout the United States. But assuming conservatively that the present average per capita cost of instruction in a standard college or university may be estimated at a minimum of $300, the following comparisons may safely be made:

1. If the average cost of instruction per student at the University of Alabama had been $300, the expenditures for the last academic year would have been $223,903. They were $138,820.

2. If the average cost per student at the Alabama Polytechnic Institute had been $300 the expenditures for the same year would have been $220,020. They were $110,010.

3. The per capita cost of instruction at an institution like the Alabama Girls' Technical Institute is not expected to be so high as that of the State University. If we assume that $250 represents a fair per capita cost for an institution of this type then the Alabama Girls' Technical Institute should have received $103,863 instead of $68,537.

Inadequacy of present budgets.—A study of the budgets of the State University, the Polytechnic Institute, and the Girls' Technical Institute, in the light of the discussion in the preceding section, points to the need of an immediate revision of the annual estimates for instruction, administration, and maintenance. It is evident that the requests of the administrators of the three institutions mentioned have been extremely moderate. Even if the requests were granted, the institutions could not be expected to maintain the standards which would be creditable to a State of the wealth and importance of Alabama. In the past, the State institutions have been voted certain conditional appropriations. Only a portion of these have materialized. Attention should be called to the fact that it is impossible to budget these conditional appropriations in a satisfactory manner.

The present plan of budgeting is also subject to another criticism. The estimates given are on the basis of an average amount for each of the next four years. Sufficient calculation has not been made for the necessary annual increase in expenditures. It is the opinion of the committee that in calculating the budget for the next quadrennium, provision should be made to increase the annual amounts in harmony with the per cent of the growth of expenditures as indicated by the figures shown during the last five years.

The support of the Alabama A. & M. College for Negroes.—The support of the Alabama Agricultural and Mechanical College for Negroes merits consideration. According to Table 90 there are 17 colored land-grant institutions which receive a portion of the Morrill funds. The principal sources of income for Negro land-grant colleges are the Federal Government and States. Among the 17 colored agricultural and mechanical colleges in the country that of Alabama ranks fourth in the amount received from the Federal Government, the sum being $22,100. Considering the racial division in the State of Alabama, this is an entirely equitable apportionment. Nevertheless, the Alabama Agricultural and Mechanical College for Negroes is seriously handicapped on account of the lack of State support. According to Table 91, the State of Alabama ranks fourteenth in the list with respect to support of Negro agricultural and mechanical colleges, the sum annually granted being $4,000. The appropriations to the Negro agricultural and mechanical colleges in Mississippi, Georgia, and Florida are at least twice as much; in South Carolina and Louisiana, three times as much; in Tennessee, nearly six times as much as those made to the similar institution in Alabama. The amount granted to the Negro land-grant college at Prairie View Tex., is $61,255. The position of Alabama is really lower in this scale than it would appear, owing to the fact that Arkansas has considerably less population and wealth than Alabama, and Delaware is very much smaller in population and wealth. Yet both States give nearly as much as Alabama. Hampton Institute, Virginia, is primarily a privately endowed institution, receiving very ample support from its endowments. Its status is only quasi-public.

TABLE 90.—*Federal appropriations to Negro land-grant colleges, 1916–17.*

Institutions.	Morrill-Nelson fund.	Other Federal funds.	Total.
1. Alcorn Agricultural and Mechanical College, Mississippi	$27,269	$12,593	$39,862
2. Florida Agricultural and Mechanical College for Negroes	25,000		
3. Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	25,000	5,745	30,745
4. STATE AGRICULTURAL AND MECHANICAL COLLEGE FOR NEGROES, ALABAMA	22,100		
5. Southern University and Agricultural and Mechanical College, Louisiana	21,144		
6. Georgia State Industrial College	16,667		
7. Hampton Normal and Agricultural Institute, Virginia	16,667	10,269	26,936
8. Negro Agricultural and Technical College, North Carolina	16,500		
9. Branch Normal College, Arkansas	13,636		
10. Prairie View State Normal and Industrial College, Texas	12,500		
11. Agricultural and Industrial State Normal School for Negroes, Tennessee	12,000		
12. State College for Colored Students, Delaware	10,000		
13. Princess Anne Academy, Maryland	10,000		
14. West Virginia Collegiate Institute	10,000		
15. Kentucky Normal and Industrial Institute for Colored Persons	7,250	1,256	8,506
16. Colored Agricultural and Normal University, Oklahoma	5,000		
17. Lincoln Institute, Missouri	3,125		

TABLE 91.—*State appropriations to Negro land-grant colleges, 1916–17. Funds for building and permanent improvement excluded.*

1.	Prairie View State Normal and Industrial College, Texas	$61,255
2.	Lincoln Institute, Missouri	51,974
3.	Colored Agricultural and Normal University, Oklahoma	45,000
4.	West Virginia Collegiate Institute	33,500
5.	Agricultural and Industrial State Normal School for Negroes, Tennessee	23,931
6.	Kentucky Normal and Industrial Institute for Colored Persons	18,250
7.	Negro Agricultural and Technical College, North Carolina	15,000
8.	Southern University and Agricultural and Mechanical College, Louisiana	12,500
9.	Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	11,500
10.	Florida Agricultural and Mechanical College for Negroes	9,000
11.	Georgia State Industrial College	8,000
12.	Alcorn Agricultural and Mechanical College, Mississippi	8,000
13.	Princess Anne Academy, Maryland	4,436
14.	STATE AGRICULTURAL AND MECHANICAL COLLEGE FOR NEGROES, ALABAMA	4,000
15.	State College for Colored Students, Delaware	3,500
16.	Branch Normal College, Arkansas	3,000
17.	Hampton Normal and Agricultural Institute, Virginia	600

TABLE 92.—*Total income, Negro land-grant colleges. Funds for building and permanent improvement excluded.*

1.	Prairie View State Normal and Industrial College, Texas	$323,740
2.	Hampton Normal and Agricultural Institute, Virginia	307,444
3.	Agricultural and Industrial State Normal School for Negroes, Tennessee	137,025
4.	Alcorn Agricultural and Mechanical College, Mississippi	79,635
5.	Colored Agricultural and Normal University, Oklahoma	74,870
6.	Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	73,114
7.	West Virginia Collegiate Institute	72,473
8.	Lincoln Institute, Missouri	58,879
9.	Negro Agricultural and Technical College, North Carolina	55,445
10.	Florida Agricultural and Mechanical College for Negroes	55,254
11.	Southern University and Agricultural and Mechanical College, Louisiana	53,961
12.	Kentucky Normal and Industrial Institute for Colored Persons	36,901
13.	STATE AGRICULTURAL AND MECHANICAL COLLEGE FOR NEGROES, ALABAMA	29,982
14.	Princess Anne Academy, Maryland	27,200
15.	Georgia State Industrial College	24,667
16.	Branch Normal College, Arkansas	19,705
17.	State College for Colored Students, Delaware	17,909

Considering the total income of Negro land-grant colleges, excluding the appropriations for buildings and permanent improvements, the Alabama Agricultural and Mechanical College for Negroes ranks thirteenth among the 17 State institutions compared, having a total income of $29,932. (See Table 92.) Compared with the Negro land-grant colleges in neighboring States, the income of the Alabama Agricultural and Mechanical College for Negroes exceeds that of the Georgia institution only.

The conditions upon which the Federal funds are appropriated make it impossible that these moneys be expended for administration and general maintenance. It is therefore essential to the successful working of any Negro land-grant institution in the South, receiving a part of the Morrill fund, that the State appropriate the necessary sums for administration, general equipment, and development of the institution.

SUMMARY OF RECOMMENDATIONS RELATING TO HIGHER EDUCATION.

1. The reform of the revenue system, as outlined in Chapter XXIII.
2. A large increase in the appropriations for the College of Agriculture of the Alabama Polytechnic Institute.
3. Emphasis by the Alabama Polytechnic Institute on the training of leaders in scientific agriculture and rural life.
4. The gradual differentiation of the programs of engineering education of the University of Alabama and the Alabama Polytechnic Institute, as follows: (*a*) Both institutions to continue to offer civil, chemical, electrical, and mechanical engineering. (*b*) The University of Alabama to relate its work directly to the needs of the mining and industrial districts, and to develop commercial and industrial engineering, hydraulic engineering, and sanitary engineering. (*c*) The Alabama Polytechnic Institute to emphasize investigations and training in highway engineering, agricultural engineering, and textile engineering.
5. The determination by the State council of education of the advisability of continuing degree curricula in architecture and architectural engineering.
6. Increased appropriations for the support of engineering education at both the Alabama Polytechnic Institute and the University of Alabama.
7. A large increase in the appropriations for the school of education of the University of Alabama to provide additional instructors.
8. The release of the Peabody fund and the supplementing of it by an amount sufficient to provide an educational building.
9. Provision for the establishment of a practice school under the direction of the school of education of the University of Alabama.

10. An increase in the support of the school of agricultural education at the Alabama Polytechnic Institute, to cover practice-teaching facilities and additional instructors.

11. The appropriation of at least $10,000 a year to both the University of Alabama and the Alabama Polytechnic Institute for the maintenance of summer schools.

12. The continued recognition of the graduates in home economics music, and commercial branches of the Alabama Girl's Technical Institute as candidates for high-school positions in these subjects.

13. The early abandonment of the attempt to continue for the present a four-year medical school in connection with the University of Alabama, and the transfer of the first two years of medical education from Mobile to Tuscaloosa.

14. Pending the time when the Mobile school can be legally discontinued, the strengthening of the first two years of its work only.

15. The maintenance of two centers of postgraduate teaching in medicine, one at Mobile and one at Birmingham, and the proper support of these centers.

16. The concentration of education in pharmacy for the present at the Alabama Polytechnic Institute.

17. Adequate appropriations for the support of the College of Veterinary Medicine at the Alabama Polytechnic Institute.

18. The placing of the college of law of the University of Alabama on a standard basis, and the appropriation of sufficient money for its support.

19. The approval of the estimates for work in commerce at the University of Alabama and a study of the needs in higher commercial training by the State council of education.

20. The establishment of a department of forestry at the Alabama Polytechnic Institute.

21. The establishment of a division of home economics at the Alabama Polytechnic Institute and the transfer to that institution of the Smith-Hughes work in the training of teachers in home economics, and the consequent expansion of the school of agricultural education to include the training of teachers in home economics.

22. The abandonment of the plan to develop the Alabama Girls' Technical Institute into a four-year college of liberal arts for women, and the rehabilitation of its original program as a technical institute.

23. The admission to the general course at the Alabama Polytechnic Institute of only such students as meet the full entrance requirements without conditions.

24. Appropriations sufficient to cover an immediate increase of at least 50 per cent in instructional costs at the college of arts and sciences of the University of Alabama, together with provision for

continuing support to keep pace with anticipated growth in enrollments.

25. The development of definite programs of research by the University of Alabama and the Alabama Polytechnic Institute and the inclusion of estimates to cover these programs in their future budgets.

26. The assumption by the State of a larger financial responsibility for the program of agricultural extension of the Alabama Polytechnic Institute than is required to meet the terms of the Smith-Lever Act.

27. The approval of the estimate for university extension in the present budget of the University of Alabama.

28. The approval of the present budget of the A. & M. College for Negroes, and continued appropriations to enable it to develop effective training in agriculture and mechanic arts.

29. The creation of a State council of education, as recommended in Chapter IV, the future determination by it of State needs in the field of professional training, and the allocation of the different portions of the tasks of professional training among the several higher institutions in harmony with the foregoing definition of the spheres of those institutions.

30. The modification of the constitution to provide for the appointment by the governor of members of the board of trustees of the University of Alabama.

31. The modification of the constitution to provide for lengthening the tenure of office of the members of the board of trustees of the Alabama Girls' Technical Institute to coincide with the tenure of the members of the governing boards of other State higher institutions.

32. The reorganization of the plan of internal administration of the Alabama Polytechnic Institute.

33. A redistribution of the ratio of professors to instructors at the university and the Alabama Polytechnic Institute.

34. The establishment of safeguards against faculty inbreeding at the Alabama Polytechnic Institute.

35. The reduction of teaching and administrative loads of faculty members at the university and the Alabama Polytechnic Institute.

36. Reduction in the size of certain sections at the university and the Alabama Polytechnic Institute.

37. Elimination as far as possible of very small classes at the university and the Alabama Polytechnic Institute.

38. The establishment of 15 teaching hours as the maximum for a full-time instructor, and of 250 to 300 student clock hours as the normal average load.

39. The establishment of temporary average maximum salaries for deans at $3,500, for full professors at $3,000, and for associate and assistant professors at $2,500.

40. The exclusion from admission to degree curricula of students from four-year high schools who present only 12 units.

41. The enforcement by the State higher institutions of a uniform system of entrance requirements in harmony with the standards of the Association of Colleges and Secondary Schools of the Southern States.

42. The publication by the higher institutions of such classifications of students as will show plainly which are enrolled in special, irregular or noncollegiate curricula as differentiated from those pursuing regular curricula.

Chapter XXIII.

FINANCING THE SCHOOLS: WHAT THE STATE INVESTS IN PUBLIC EDUCATION.

Ample funds, the fundamental problem.—How well or how poorly the State supports its public schools is the most fundamental problem of the entire survey. For this reason its discussion has been deferred until all other questions could be disposed of. Education costs money, and, if it is to be a good education—the kind necessary in a democracy like ours—it requires a liberal amount of money. A cheap, shoddy school system is the most expensive system both in immediate results and in lasting effects on the people. That Alabama has not invested enough funds in its schools is undeniable in face of the facts laid down in the foregoing chapters. The schools have failed to reach all the people of the State. They have not, to any appreciable degree, influenced health conditions in the State. They have scarcely yet made the beginnings of organizing study courses to meet the real occupational needs of the population. The school plants are generally inadequate and meagerly equipped. The teacher-training institutions are poorly supported and teachers' salaries are so low that teaching as a profession in Alabama is becoming seriously jeopardized. The State's higher educational institutions are, in contrast with similar schools in other States, very meagerly supported.

Now, just what does Alabama invest in the educational system described above? Are the returns commensurate with the investment made? If the present investment is wholly inadequate, how will it be possible to supply the necessary funds? Can the present tax laws and methods in use for enforcing these laws be improved so as to supply this increased revenue without working undue hardship to the people? These and similar questions will be considered in the following paragraphs:

What the present sources of revenue are.—Alabama utilizes State, county, and district taxes for maintenance of its schools. Of these, the State appropriates the proceeds from certain permanent funds, a constitutional millage tax, and direct legislative appropriations.

These several sources are known as the "General educational fund." The county funds are derived from millage taxes, a State-wide poll tax apportioned to the county school funds, and certain "other sources." The local school district support comes from millage taxes, "donations" from municipal revenues, tuition fees, and similar sources.

The State constitution and successive legislative enactments contain the following provisions pertaining to public-school maintenance. These are exclusive of the higher educational institutions. special schools and secondary schools:

1. The annual interest at 6 per cent on all sums of money which have heretofore been or which may hereafter be received by the State as the proceeds of sales of lands granted or entrusted by the United States to the State, or to the several townships thereof, the valueless sixteenth section fund, and the school indemnity fund for school purposes.

2. The annual interest at 4 per cent on that part of the surplus revenue of the United States deposited with the State under the act of Congress approved June 23, 1836.

3. All annual rents, incomes and profits or interest arising from the proceeds of sales of all such land as may hereafter be given by the United States, or by this State, or by indivídulas, for the support of the public schools of the State.

4. All such sums as may accrue to the State as escheats, the same to be applied to the support of the public schools during the scholastic year next ensuing the receipt in the State treasury.

5. The net amount of poll tax that may be collected in the State; poll tax collected in every county to be retained therein for the support of the public schools thereof.

6. Licenses which are by law required to be paid into the school fund of any county to be promptly paid by the judge of probate or other person collecting the same to the county superintendent of education, and to be expended for the benefit of the public schools of each county.

7. A further sum of $500,000 annually for every scholastic year, provided, however, that there is hereby appropriated the additional sum of $100,000 annually, if in the judgment of the governor of Alabama the financial condition of the State treasury will permit of such additional appropriation. Provided, that the sum of $250,000 per annum shall be paid only on the approval of the governor, who may approve the same in whole or in part from time to time.[1]

8. That any county in the State and any school district now existing or hereafter formed in any county, may levy and collect a special tax for public-school purposes, not exceeding 30 cents on each $100 worth of taxable property in such county and in such district.[2]

What these sources of revenue produce for educational investment.—The general educational fund for the scholastic year 1917–18 was made up from items 1, 2, 3, 4, and 7 in the above enumeration,

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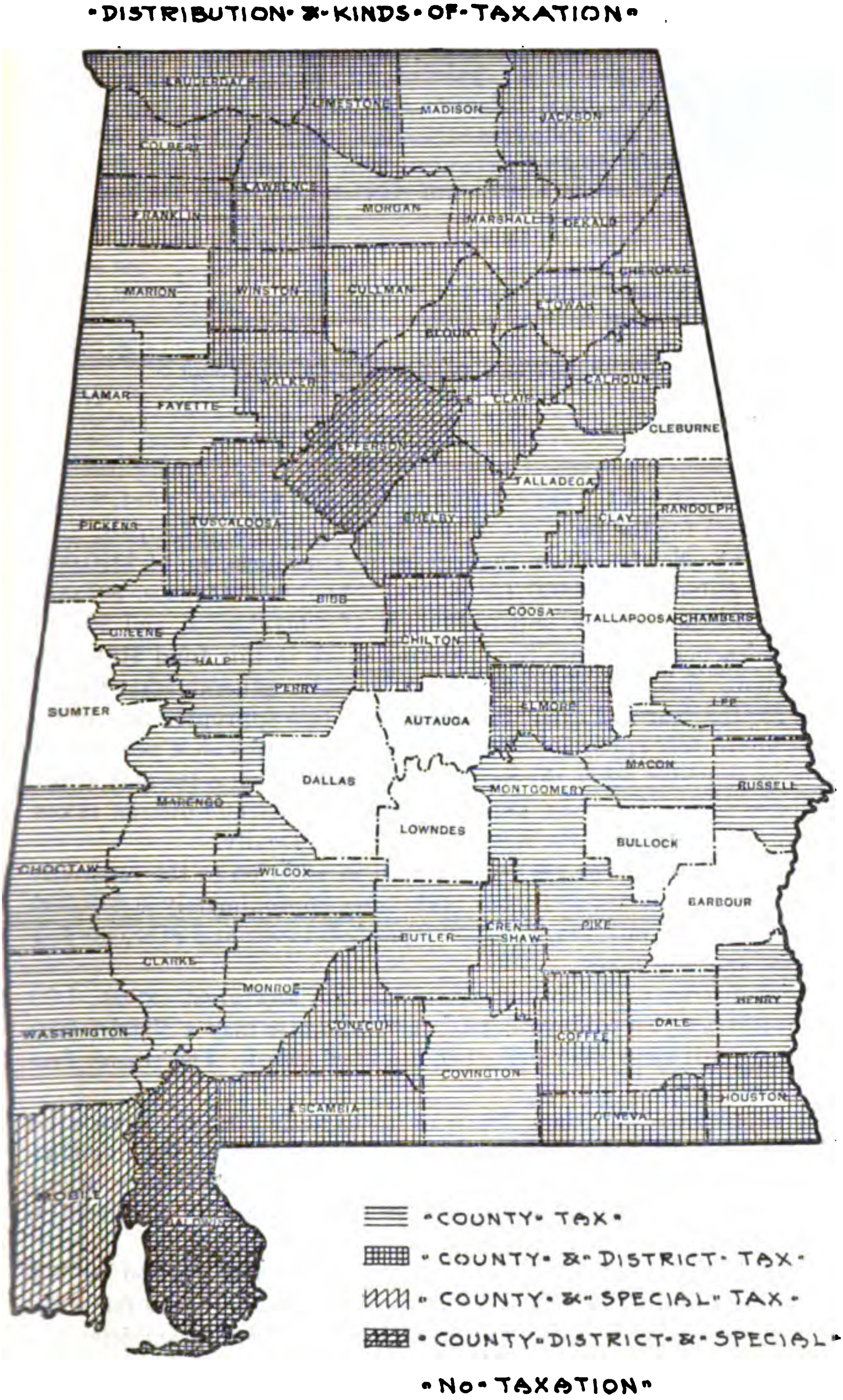
[1] This $250,000 has never been released by the governor.

[2] This is in addition to an old 1 mill county tax legalized in 1901, and special taxes in five counties.



MAP 18.

[This does not include the old 1-mill tax.]

together with a small balance on hand and examination fees, and included the following sums:

Unapportioned balance	$8,383.03
Constitutional 3-mill tax (net)	1,890,588.70
Special school tax, land redemptions	7,391.23
Special school tax, former years	3,072.47
Fees, examination of teachers (net)	78.08
Escheats	8,612.04
Interest on—	
Sixteenth section lands	126,426.47
Valueless sixteenth section lands	5,825.47
School indemnity lands	10,221.72
Surplus revenue	26,763.47
James Wallace fund, Lawrence County, under act approved Feb. 28, 1911	275.25
Legislative appropriation	350,000.00
	2,437,637.93

This total, except the annual appropriation of $350,000, must, under law, be used for the payment of salaries of teachers, principals, and supervising officials. From the legislative appropriation of $350,000 must be deducted $112,000 for normal school maintenance, $67,000 for the erection, repair, and equipment of schoolhouses, and $6,500 for the teachers' institute fund, leaving in all in this fund $161,500. The above sum, $2,437,637.93, comprised the general educational fund for the year and after deducting the State appropriations indicated above was apportioned to the several counties on a per capita basis, as provided for in the State constitution. This is the only fund available for public school purposes, unless county and district taxes are voted, or supplements, fees, etc., are added locally.

The county fund for 1917–18 received in addition to the constitutional 3-mill State tax and other State taxes approximately $1,855,000 from the county mill tax, $188,950 from poll taxes, and $131,000 for bonuses and dog taxes.

Local district taxes are not yet utilized to any great extent, 109 school districts, all told, voting them. In no case may a district tax be voted until after the county tax has been levied. The reason for this is self-evident.

To supplement the school funds in towns and cities, the town and city councils may make direct appropriations from the regular municipal levy—a plan that has proved wholly unsatisfactory, since it throws the school authorities wholly upon the mercy of the city council which has absolute control of the budget.

Incidental fees and popular subscriptions are also utilized to increase the funds with which to maintain the schools. These features are objectionable and clearly indicate the newness and incompleteness of taxation for public education in Alabama. Fortunately, this practice is being rapidly discontinued.

The higher institutions of learning, the county high schools, and special schools of all kinds are excluded from the above statement but receive, instead, direct legislative and other appropriations. The following table gives the total summarized expenditures of all classes of schools in the State for 1917-18:

TABLE 93.—*Amount expended for schools.*

Public schools	$5,725,772
County high schools	240,524
District agricultural schools	62,764
Normal schools	614,826
University of Alabama	194,783
Alabama Polytechnic Institute	138,805
Alabama Girls' Technical Institute	64,909
Alabama School for Deaf and Blind	88,220
Alabama Boys' Industrial School	57,443
Northeast Alabama Agricultural and Industrial Institute	8,732
Private and denominational schools	1,124,836
Alabama Reform School for Juvenile Negro Lawbreakers	19,498
State Training School for Girls	34,575
Total	8,375,637

How this investment compares with expenditures in other States.—Are the expenditures summarized above really commensurate with the needs of a great State like Alabama? This query has already been answered in the negative. But how, then, do they compare with the school investment of the country as a whole and with other Southern States? Three maps have been prepared to furnish this comparison. The first of these (Map 19) shows graphically the amount spent for education in each State per capita of total population. *On this basis Alabama ranks as the forty-seventh* State, Mississippi alone making a poorer showing.

The second map (Map 20) tells the same story on the basis of school population, 5 to 18 years of age. Here Alabama ranks forty-sixth, Mississippi and South Carolina only standing lower.

Finally, the third map (Map 21) gives the total investment per child. 5 to 18 years of age. This included the total value of all school property in the United States used for school purposes. *Here Alabama ranks lower than any other State in the country.* Alabama is richer than many of the States that are investing much larger sums in education. Not only must the State exert itself to keep abreast of others in this matter, but it must plan to invest ever-increasing sums on public education, which is in no sense a money-saving process. *The present conditions in the United States demand a much larger ex-*

penditure than heretofore, in order to obtain the efficiency in school service required for the period of after-war reconstruction.

TABLE 94.—*Per capita investment on the basis of total school population, 1918.*

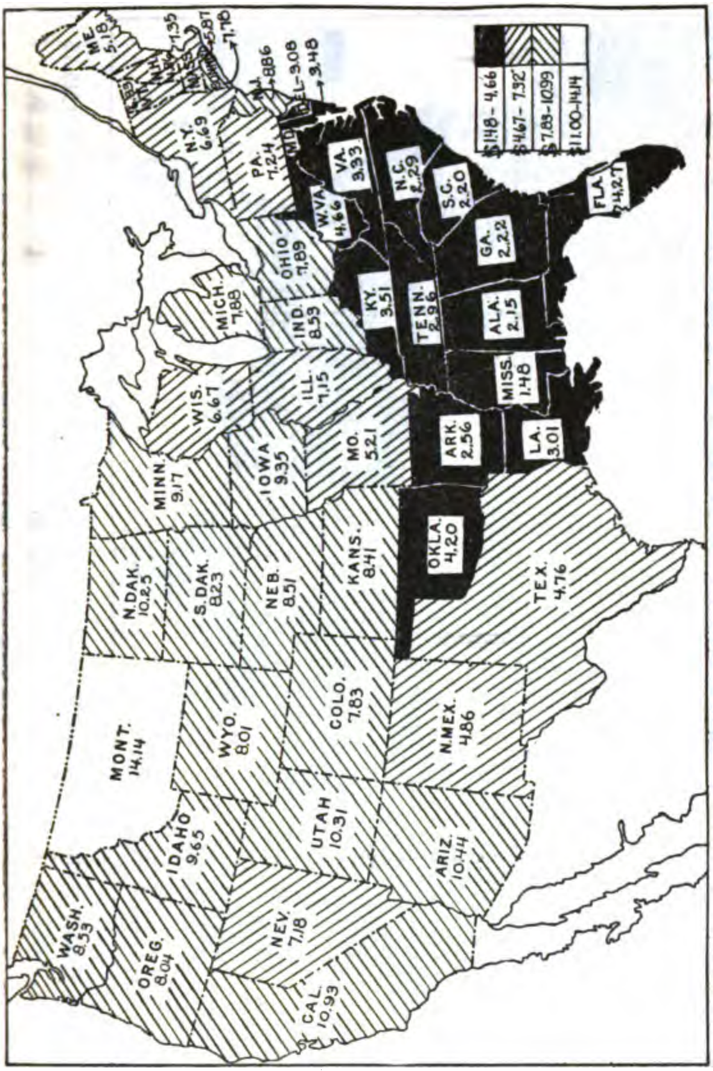
1.	Mobile	$14.62
2.	Jefferson	14.41
3.	Baldwin	13.52
4.	Chambers	11.25
5.	Escambia	10.37
6.	Lauderdale	9.78
7.	Montgomery	9.69
8.	Pike	9.58
9.	St. Clair	9.13
10.	Walker	9.01
11.	Morgan	8.89
12.	Etowah	8.74
13.	Houston	8.73
14.	Monroe	8.64
15.	Madison	8.44
16.	Shelby	8.44
17.	Talladega	7.76
18.	Covington	7.70
19.	Washington	7.61
20.	Chilton	7.44
21.	Franklin	7.33
22.	Calhoun	7.20
23.	Colbert	7.19
24.	Bibb	7.14
25.	Geneva	7.08
26.	Elmore	6.98
27.	Tuscaloosa	6.98
28.	Limestone	6.90
29.	Conecuh	6.80
30.	Randolph	6.76
31.	Pickens	6.67
32.	Clay	6.51
33.	Dale	6.50
34.	Winston	6.35
35.	Tallapoosa	$5.99
36.	Butler	5.98
37.	Lee	5.81
38.	Fayette	5.79
39.	Crenshaw	5.72
40.	Dekalb	5.59
41.	Coosa	5.50
42.	Cullman	5.46
43.	Lamar	5.43
44.	Marshall	5.43
45.	Clarke	5.21
46.	Coffee	5.19
47.	Blount	5.09
48.	Lawrence	5.06
49.	Dallas	4.95
50.	Marion	4.80
51.	Marengo	4.78
52.	Henry	4.68
53.	Autauga	4.67
54.	Choctaw	4.61
55.	Macon	4.59
56.	Cherokee	4.50
57.	Cleburne	4.49
58.	Perry	4.30
59.	Hale	4.28
60.	Jackson	4.27
61.	Wilcox	4.17
62.	Bullock	4.10
63.	Barbour	4.09
64.	Greene	4.09
65.	Russell	3.96
66.	Lowndes	3.54
67.	Sumter	3.26

A closer analysis of the taxing system.—With the one exception of Montana, Alabama has depended more completely than any other State on State taxation for the maintenance of its schools. Even at the present time, with all except eight counties voting a county tax, Alabama makes less use of local taxation than any other State in the Union, although it should in justice be said that county and district taxes are now increasing at quite a remarkable rate.

Without going any further into the matter of tax equalization at this juncture, it is deemed desirable to make a closer study of the several sources from which the funds are derived.

1. *The permanent school fund, depleted through bad trusteeship.*—Perhaps the darkest page in Alabama educational history

is the lamentable story of how the State has discharged its trusteeship of the vast acreage of school lands granted by the Federal Government, the lease of sale of which should be "invested in some productive fund, the proceeds of which shall be forever applied for the use and support of the schools—for which they were originally



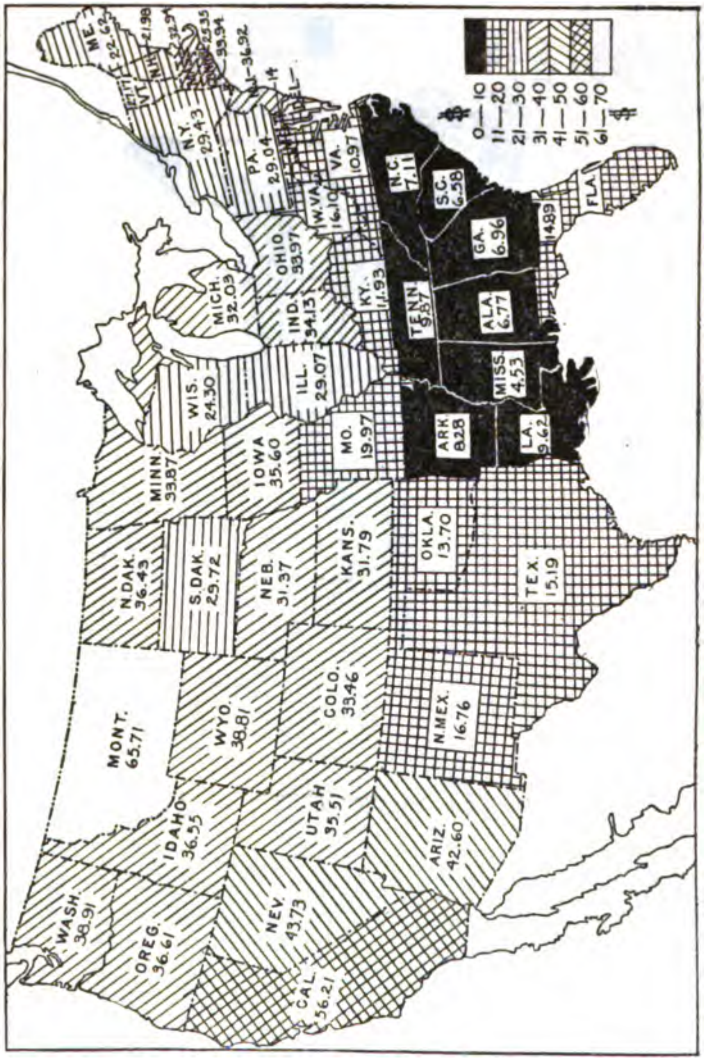
EXPENDED PER CAPITA TOTAL POPULATION. 1915–16.

MAP 19.

[Alabama ranks as forty-seventh State.]

reserved and set apart, and for no other purpose whatsoever." The details of this stewardship have been told above (see Chapter III) and need only the briefest mention here.

The Federal Government granted Alabama, in common with other States organized prior to 1836, the sixteenth section of land in each township in the State for school purposes. Whenever this section had already been disposed of, the State was given the right to select in lieu thereof other unoccupied lands—the so-called "indemnity lands." This great domain amounted in all to 1,006,080 acres. Later on the State received upward of 100,000 acres "for use in schools in those townships where the sixteenth sections are comparatively valueless."



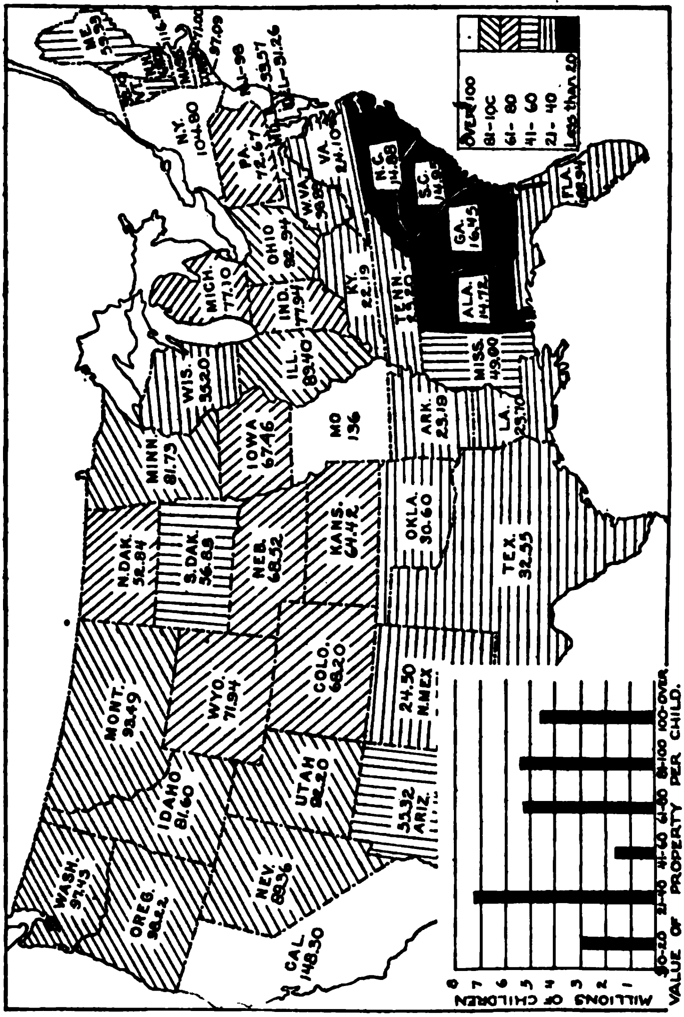
AVERAGE EXPENDITURE PER CAPITA OF POPULATION. 5-18 YRS. 1915-16

MAP 20.

[Alabama ranks as forty-sixth State.]

It is noticeable from the chart that Alabama derived more than one-half of its school revenues from State and permanent funds.

Beginning in 1825, the State authorized the sale or lease of the school lands, the proceeds to be invested in the United States Bank or the State Bank of Alabama, *the interest on which only should be used for school purposes.* The State bank had collected more than one million dollars and it or its branch banks held nearly one-half million of land notes, when it went into receivership in 1848. The State thus lost practically the entire school fund accumulated up to that time; and instead of promulgating plans that might eventually have restored the fund, it obligated itself—which means that the State shifted the burden to the ultimate taxpayer—to pay 6 per cent "in all perpetuity" on a paper fund, the equivalent of what had been lost.



School Property.—Investment for each child 5 to 18 years. 1915-16.

MAP 21.

[Alabama ranks as lowest State.]

It is true that an attempt was made, under act of 1881, to accumulate all future sales and settlements on outstanding obligations as a new permanent fund. Thirty-nine thousand five hundred dollars of State bonds were actually purchased for the fund; but, unfortunately, this act was repealed in 1889, from which time to the present all proceeds from the school lands have been turned into the State treasury and used for miscellaneous expenses, the perpetual paper fund being increased by these amounts.

But the bad stewardship did not cease with the early failures. Through bad management down through the years the lands were frittered away. Some lands were sold and never fully paid for; others that had never been sold had gone into the possession of private and corporate interests, which have generally succeeded in securing title through action of the statute of limitations. To-day the State has clear title to only about 135,000 acres of school land; 118,000 of this being sixteenth sections, and most of the rest, indemnity land.

Much of the 16,000 acres of indemnity land now owned by the State, is valuable coal lands. Some small areas of marketable timber have also been spared to the State. In addition, rentals of considerable consequence could be collected from school lands now under cultivation, but of which no record is being kept.

While much has been lost, it is not yet too late for the State to discharge the trust imposed in it, in relation to the land funds. The $2,300,000 now in the paper fund, and the surplus revenue fund (1836) amounting to $670,000, also changed into interest-bearing notes, if converted into productive funds, together with the incomes from sales, rents, and royalties on the lands still intact, could, in time, produce for the schools of the State an endowment of considerable importance.

It is the conviction of the survey committee that the Legislature of Alabama should take the necessary steps to clear up this obligation without delay, by setting aside annually for a period of years a certain sum of money from the general treasury or other source, until the obligation is fully liquidated—these funds to be administered and invested in gilt-edge State and Federal securities by a State board, of which the State superintendent of education shall be the chairman.

2. *Legislative appropriations.*—Under section 260 of Article XIV of the constitution of Alabama, "it shall be the duty of the legislature to increase the public-school fund from time to time, as the necessity therefor and the condition of the treasury and the resources of the State may justify." In accordance herewith the legislature has provided a possible $600,000 for this purpose, of which $350,000 has been appropriated. As soon as the State adopts a

full 60 per cent tax basis, there will be no difficulty about releasing all of this fund, and, if it shall be deemed advisable, to increase it substantially.

3. *The constitutional 3-mill tax.*—This tax has been the chief source of revenue for the public schools from the time the State school system was established. The estimated income from this tax for 1919–20 is $1,950,000 in a total of $2,479,588 for the entire general education fund. The constitution further stipulates that this fund must be used for the payment of salaries of teachers, principals, supervisors, and superintendents of schools. This mandate was wholly sound at the time the constitution was adopted, because salaries of instructors are the chief source of outlay in operating a school system; but with the adoption of the county and district millage taxes, conditions are becoming materially changed in this respect, as set forth in a succeeding paragraph, and the time will probably soon be here when this paragraph of the constitution can be modified so as to place the main burden of school maintenance on the county and district, which would release much of the State fund (particularly the legislative appropriation) to be used for awarding exceptional educational enterprise and helping poor districts.

4. *County and district millage taxes.*—The greatest single forward stride in the Alabama school system has resulted from the adoption of the amendment to the constitution voted in November, 1916. It is now possible to vote a county tax not exceeding 4 mills and a district tax of not exceeding 3 mills on the dollar. While it would have been highly desirable not to have placed so low a maximum on this tax, it is felt that with a fair legal assessment and normal increase from year to year in the State's resources, this tax will help immensely in establishing the school system on a firm footing and in adding the local initiative that has been long wanting.

During the years 1917 and 1918, 54 counties have voted the county tax and a large number of local districts have accepted a similar obligation. This is the best evidence that the people of the State have fully accepted the principle of equal responsibility in the education of all the children of the Commonwealth. It is well to observe again that no district tax may be levied until after a county millage tax has been voted. This is to safeguard the poorer sections of the county and give them the benefits of sharing in the wealth of richer corporate and other interests, all of which is eminently fair. The total county millage tax for 1917–18 was $1,854,119.72.

The plan for equalizing taxation over the State eminently fair.—It is a well-established principle in American democracy that the entire wealth of the State should be utilized to equalize educational advantages among all the children of the Commonwealth. Ignorance or inefficiency in the local community is reflected on the entire Commonwealth and eventually levies a heavy burden on it for penal and corrective institutions. In this respect, Alabama has done well, as the 3-mill constitutional tax is levied on city and country alike for the benefit of all the people wheresoever they may dwell in the State. But the method in vogue for apportioning the State tax is, unfortunately, neither democratic nor equable, as will appear later.

In a similar way, it is agreed by thoughtful leaders in the educational profession that local taxation is absolutely necessary to foster and keep alive local interest in school affairs, and to develop local initiative and independence. Local taxation is new in the State, and former want of this kind of support has unquestionably done more to retard the policy of education at public expense than all other factors combined.

It is generally agreed, and it is an accepted principle of the United States Bureau of Education, that the State should provide funds equivalent to about one-third of the required funds, to be used for general maintenance, and particularly as an award to encourage the community to greater efficiency in education; that the county taxes should be used chiefly for general school maintenance; and the district taxes for such extraordinary outlays as new sites, buildings, equipment, etc.

The survey committee believes that, in Alabama, the present State three-mill tax may well continue to be used for general maintenance, although the legislative appropriations should be placed at the immediate disposal of the State department of education (or State board of education) to be used solely to encourage outstanding educational endeavor, such as organizing the right type of consolidated schools and rural high schools, teacher-training institutions for white teachers, and county training schools for colored teachers, and similar forward-looking educational work.

How the State general fund is apportioned.—The method of apportioning the State general fund is, in practice, wholly unfair. The constitution provides that "the public-school fund shall be apportioned to the several counties in proportion to the number of school children of school age therein, and shall be so apportioned to the schools in the districts or townships in the county as to provide, as nearly as practicable, school terms of equal duration in such school districts or townships." This well-intentioned section of the State's constitution has failed wholly in its purpose and has in the end militated as strongly against the white school children—which it was intended to protect—as against the colored children.

1. It is based on school population, which in Alabama means all persons over 7 years of age and under 21 years—many of whom are

beyond reach of the schools and should not be included as a basis of apportionment.

2. It has failed to provide terms of equal duration in the several counties and districts, for either white or colored children.

3. It has made it possible for county boards of education in the black-belt counties to utilize these funds locally in such a manner as to make county and district taxation unnecessary, thereby, to all practical purposes, obliging (*a*) the white population in other counties to maintain the white schools in the black-belt counties, while (*b*) the colored schools in the same counties were being discriminated against in a most flagrant manner.

These methods explained in greater detail.—1. Distribution of State school funds should always be based on the principle that educational achievement in a given school community, as an example for emulation, is deserving of genuine encouragement and reward. Thus to distribute the State funds on the arbitrary basis of so-called school population—persons between 7 and 21 years of age, whether they are in school or not—is a doubtful practice; but to make the apportionment on the basis of actual school attendance would be to reward effort in a worthy way. For example, of what profit is it to Alabama to maintain a comparatively expensive school plant and teaching force when only 69 per cent of the school population are enrolled in these schools, and only 37 per cent of the school population actually attend these schools regularly? Under these conditions, why should the State distribute its bounties on a population basis, only 37 per cent of which make use of the schools?

A much more satisfactory basis would be to place the apportionment in part on the aggregate daily attendance in all the schools in a county and in part on the number of teachers employed—the former, because this would induce people to send their children to school so that the community might reap the benefit; the latter, because the chief cost of a school system is proportioned directly on the number of teachers employed.

2. A casual glance at the school attendance table demonstrates emphatically that the present system of apportioning the State funds has failed "to provide terms of equal duration in the several counties and districts;" chiefly because the State surrenders control of the funds the moment they are turned over to the county boards of education.

Barbour, Bullock, Dallas, Lowndes, and Sumter Counties have not yet voted the new 3-mill county tax, and Cleburne and Tallapoosa get along with the one 1-mill county tax. Table 94 further shows graphically that every one of these counties expends less than $5 per capita on its school population. Still, most of them rank quite high in the length of term and expenditure on the enrollment basis. How can this be? It is useless to hide the truth. Only by facing facts as they are and clearing up this injustice can the educational solvency of these counties be maintained. Here, and to a lesser degree in some adjacent counties, the State funds—apportioned on the basis of the whole white and colored population—are reapportioned so that the comparatively small white school population gets an unusually large proportion of the fund, and the comparatively large colored school population gets an unusually small share of the fund.

The results of this practice on the colored children as described in Chapter IX are wholly without defense on the grounds of the "as nearly as practicable" clause in the constitution. For in these counties the colored population is almost wholly deprived of public school support, being obliged to depend largely on private subscriptions and donations. The thinking people of Alabama are opposed to these local practices. They should no longer be tolerated.

But this is not all. This method of distribution also works a flagrant discrimination against the white school population of the State at large. These seven counties actually maintain their schools for the greater part at the expense of other Alabamians, since their only tax is a small State levy. Could there be a greater commentary on the unjust procedure than the following statement of facts? In 1916 the Alabama State department of education made a comparative study of the 67 counties in the State, ranking them in accordance with nine specific educational features. In this classification, Bullock and Dallas Counties received, respectively, first and second place; Sumter was number five, and Lowndes was number seven, and, be it remembered, these were the counties that were depending on the bounties from the State at large for their ranking!

A fair plan for distributing the State funds.—Alabama can not afford to continue the present plan of apportioning its State funds. They should be used (1) for all the children attending school; (2) as an award for good work well done; and (3) for the schools that need help the most.

The survey committee is convinced that these ends can be best served, if not to exceed one-half of the State fund were apportioned on the aggregate daily attendance of school children in each school in the county, and the total number of teachers employed; and the balance of the fund were entrusted to the State department of education (State board of education) for apportionment to the schools of the State as rewards for good work, and as direct help for needy, struggling communities. This would be both democratic and just. Such a readjustment would call for an amendment to the State constitution.

Dividing State and county funds between county and city boards of education.—It is wholly just that all the property within the bounds of the county shall be used for the education of all its children, regardless whether they live in city or open country. In counties with large industrial centers of great wealth, these cities invariably pay into the county funds more than they get back; but this, too, is eminently just, when one takes into consideration that the cities are always built at the expense of the open country whose best blood they draw upon and whose ability to produce wealth they thereby reduce. Again, if the cities use a portion of their wealth to aid in educating the rural population, they will ultimately profit by receiving from the country a more intelligent citizenship.

But the present system, or lack of system followed in dividing the State and county taxes between county and city schools, is not satisfactory and should be remedied by law. The county boards of education may now use their own discretion as to how the funds shall be divided. It is, of course, a matter of personal judgment largely, and based on actual needs of the school communities, under consideration. But the average county board has no exact knowledge of the actual needs of the incorporated cities whose school affairs are managed by local boards appointed by the city council. This has led to a bad practice. In some counties the funds have been divided on the half-and-half plan, which clearly gives the large city more than its share. In other places, there have been gentlemen's agreements of the boards that the division shall be on the basis of school population. This is a reasonable method of sharing, until a more equable plan can be initiated, which method would be the aggregate attendance-teacher basis outlined above. Finally, in some places, particularly in the towns and villages under county control, the present practice tends to discourage the people from voting local district taxes. There are many instances on record to show that the county boards have actually penalized such progressive communities by reducing their quota of county taxes immediately upon having voted a local tax to supplement this county portion.

The survey committee is convinced that this matter should be settled through legislative enactment—

1. To direct county boards of education to share the funds which pass through their hands with cities of more than 2,000 population having separate school boards on the basis of school population, until such time as an equable aggregate attendance teacher basis can be realized.

2. To safeguard local taxation from penalization by directing the county boards in every way to award and encourage local taxation by increasing or at least maintaining the rates of distribution in vogue at the time of voting the local tax.

TABLE 95.—*Amounts received by counties from State for education, etc.*

Counties.	Amount paid into the State treasury by county under 3-mill constitutional tax for education.	Amount county receives from State for educational purposes.			Excess of amount received over amount paid into State treasury.	Excess of amount paid.
		State appropriation.	Bonus.	Total.		
Autauga	$12,829.68	$19,356.48	$1,000	$20,356.48	$7,526.80	....
Baldwin	23,897.45	20,943.78	3,000	23,943.78	46.33	....
Barbour	17,734.22	36,279.10	....	36,279.10	18,544.88	....
Bibb	15,397.64	24,135.54	3,000	27,135.54	11,737.90	....
Blount	14,678.31	24,864.84	1,000	25,864.84	11,186.53	....
Bullock	15,012.63	35,938.76	....	35,938.76	20,926.13	....
Butler	17,818.34	35,689.94	1,000	36,689.94	18,871.60	....
Calhoun	46,706.65	44,561.66	3,000	47,561.66	855.01	....
Chambers	24,661.34	40,729.26	3,000	43,729.26	19,067.92	....
Cherokee	11,751.13	20,097.22	....	20,097.22	8,346.09	....
Chilton	16,023.04	23,569.26	3,000	26,569.26	10,546.22	....
Choctaw	12,536.82	21,650.20	1,000	22,650.20	10,113.38	....
Clarke	14,473.91	31,488.60	1,000	32,488.60	18,014.69	....
Clay	12,014.80	21,807.50	1,000	22,807.50	10,792.70	....
Cleburne	7,992.34	13,953.94	1,000	14,953.94	6,961.60	....
Coffee	15,406.73	29,026.14	1,000	30,026.14	14,619.41	....
Colbert	21,361.79	27,181.44	3,000	30,181.44	8,819.65	....
Conecuh	14,642.38	23,186.02	3,000	26,186.02	11,543.64	....
Coosa	8,038.12	17,975.10	1,000	18,975.10	10,936.98	....
Covington	24,280.63	37,806.34	3,000	40,806.34	16,525.71	....
Crenshaw	11,119.17	23,783.76	1,000	24,783.76	13,664.59	....
Cullman	21,200.09	31,528.64	....	31,528.64	10,328.55	....
Dale	15,142.45	23,200.32	1,000	24,200.32	9,057.87	....
Dallas	41,724.81	55,240.90	....	55,240.90	13,516.09	....
Dekalb	18,640.67	31,866.12	....	31,866.12	13,225.45	....
Elmore	16,624.83	30.230.20	3,000	33,230.20	16,605.37	....
Escambia	21,427.58	22,062.04	3,000	25,062.04	3,634.46	....
Etowah	37,781.98	39,673.92	3,000	42,673.92	4,891.94	....
Fayette	10,765.59	19,939.92	1,000	20,939.32	10,174.33	....
Franklin	13,017.24	19,485.18	3,000	22,485.18	9,467.94	....
Geneva	15,553.45	28,737.28	3,000	31,737.28	16,183.83	....
Greene	11,302.74	18,504.20	....	18,504.20	7,201.46	....
Hale	12,720.22	30,796.48	....	30,796.48	18,076.26	....
Henry	10,988.33	21,703.98	....	21,703.98	10,715.65	....
Houston	23,056.36	33,389.32	1,000	34,389.32	11,332.96	....
Jackson	23,037.26	33,398.28	....	33,398.28	10,361.02	....
Jefferson	462,714.71	215,835.62	3,000	218,835.62	....	$243,879.09
Lamar	11 718.71	20 062.90	1,000	21,062.90	9,344.19	....
Lauderdale	18,686.68	34,674.64	3,000	37,674.64	18,987.96	....
Lawrence	12,000.98	23,143.81	1,000	24,143.81	12,142.83	....
Lee	26,598.70	33,650.76	....	33,650.76	7,052.06	....
Limestone	22,203.02	28,811.64	3,000	31,811.64	9,608.62	....
Lowndes	13,997.36	30,544.80	....	30,554.80	16,547.44	....
Macon	14,463.76	26,074.62	1,000	27,074.62	12,610.86	....
Madison	39,912.69	44,730.40	3,000	47,730.40	7,817.71	....
Marengo	21,051.20	36,310.56	1,000	37,310.56	16,259.36	....
Marion	12,177.06	21,707.40	1,000	22,707.40	10,530.34	....
Marshall	15,473.62	32,446.70	3,000	35,446.70	19,973.08	....
Mobile	135,726.50	70,398.90	3,000	73,398.90	....	62,327.60
Monroe	13,679.29	27,699.10	3,000	30,699.10	17,019.81	....
Montgomery	103,133.69	84,129.76	3,000	87,129.76	....	16,003.93
Morgan	33,028.58	34,520.20	1,000	35,520.20	2,491.62	....
Perry	13,483.14	32,547.54	....	32,547.54	19,064.40	....
Pickens	12,740.21	29,329 30	3,000	32,329.30	19,589.09	....
Pike	21,937.30	32,040.58	....	32,040.58	10,103.28	....
Randolph	13,550.02	26,618.02	1,000	27,618.02	14,068.00	....
Russell	13,785.95	29,355.04	....	29,355.04	15,569.09	....
Shelby	26,985.85	26,051.74	3,000	29,051.74	2,065.09	....
St. Clair	19,946.64	24,307.14	3,000	27,307.14	7,360.50	....
Sumter	17,769.25	34,217.04	....	34,217.04	16,447.79	....
Talladega	37,834.94	39,136.24	1,000	40,136.24	2,301.30	....
Tallapoosa	20,656.53	33,464.86	1,000	34,464.86	13,808.33	....
Tuscaloosa	47,455.77	46,981.22	1,000	47,981.22	525.45	....
Walker	38,614.12	38,126.66	3,000	41,126.66	2,512.54	....
Washington	11,943.94	13,679.38	3,000	16,679.38	4,735.44	....
Wilcox	14,249.62	33,576.40	....	33,576.40	19,326.78	....
Winston	7,080.68	14,911.24	3,000	17,911.24	10,830.56	....
Total	1,925,961.23	2,232,865.87	104,000	2,336,865.87	733,115.26	325,210.62

TABLE 96.—*School population, enrollment, and expenditures by counties.*

Counties.	School population.	Number enrolled.	Total expenditure for all purposes.	Average per pupil of school population.	Average per pupil enrolled.
Autauga	6,824	3,855	$32,010	$4.67	$8.30
Baldwin	6,915	5,139	93,639	13.52	18.20
Barbour	12,028	6,408	49,230	4.09	7.68
Bibb	7,737	5,873	55,311	7.14	9.41
Blount	8,964	7,247	45,663	5.09	6.16
Bullock	11,071	5,312	45,432	4.10	8.55
Butler	10,065	7,670	60,317	5.98	7.86
Calhoun	16,919	9,976	122,950	7.20	12.32
Chambers	14,592	9,844	164,185	11.25	16.67
Cherokee	7,218	5,516	32,548	4.50	5.90
Chilton	7,635	6,100	56,822	7.44	9.31
Choctaw	7,089	4,966	32,621	4.61	6.56
Clarke	9,450	5,604	49,279	5.21	8.79
Clay	7,728	6,351	50,341	6.51	7.92
Cleburne	4,654	3,912	20,924	4.49	5.09
Coffee	10,430	7,743	54,144	5.19	6.99
Colbert	10,038	6,920	72,190	7.19	10.57
Conecuh	8,408	6,706	57,257	6,80	8.53
Coosa	5,127	4,345	28,219	5.50	6.49
Covington	11,873	9,946	92,428	7.70	9.29
Crenshaw	8,326	5,720	47,650	5.72	8.33
Cullman	11,336	9,204	61,967	5.46	6.73
Dale	7,900	5,328	51,351	6.50	9.63
Dallas	18,023	9,374	89,348	4.95	8.78
DeKalb	11,835	9,130	66,229	5.59	7.25
Elmore	9,900	6,810	69,109	6.98	10.14
Escambia	8,058	6,044	83,589	10.37	13.88
Etowah	14,263	11,301	124,668	8.74	11.03
Fayette	5,957	5,525	34,507	5.79	6.24
Franklin	7,201	5,244	52,852	7.33	10.07
Geneva	9,778	9,677	69,252	7.08	7.15
Greene	5,607	2,228	22,948	4.09	10.29
Hale	9,324	5,064	39,972	4.28	7.88
Henry	7,051	4,856	33,035	4.68	6.80
Houston	11,155	10,590	97,446	8.73	9.20
Jackson	11,856	8,348	50,646	4.27	6.06
Jefferson	89,654	59,711	1,281,239	14.41	21.45
Lamar	6,507	5,953	35,368	5.43	5.94
Lauderdale	14,516	10,575	142,048	9.78	13.43
Lawrence	7,827	6,177	39,605	5.06	6.41
Lee	10,771	6,200	62,586	5.81	10.09
Limestone	10,373	7,555	71,599	6.90	9.47
Lowndes	9,805	4,660	34,795	3.54	7.46
Macon	8,649	5,721	39,651	4.59	6.93
Madison	15,522	12,142	136,016	8.44	11.20
Marengo	12,360	5,895	59,088	4.78	10.02
Marion	7,503	6,961	36,016	4.80	5.17
Marshall	11,249	9,161	61,100	5.43	6.66
Mobile	23,033	15,334	336,940	14.62	21.32
Monroe	9,430	6,883	81,612	8,64	11.85
Montgomery	27,219	15,781	263,817	9.69	17.35
Morgan	12,057	9,364	107,266	8.89	11.45
Perry	9,310	6,055	49,090	4.30	6.62
Pickens	9,350	7,544	62,438	6.67	8.14
Pike	10,484	9,213	100,479	9.58	10.90
Randolph	9,627	8,156	65,163	6.76	7.98
Russell	9,319	2,590	36,962	3.96	14.23
Shelby	8,590	6,836	72,564	8.44	10 61
St. Clair	8,203	6,776	75,906	9.13	11.20
Sumter	12,039	4,227	39,297	3.26	9.29
Talladega	12,684	10,771	99,530	7.76	9.24
Tallapoosa	10,230	10,157	61,340	5.99	6.03
Tuscaloosa	16,024	12,267	111,929	6.98	9.13
Walker	14,278	12,983	128,776	9.01	9.91
Washington	5,065	3,616	38,584	7.61	10.67
Wilcox	10,845	4,482	45,236	4.17	10.09
Winston	4,947	2,429	31,409	6.35	12.93

Alabama's ability to invest more liberally in public school education unchallenged.—It is quite evident from all that has been said above that Alabama's greatest educational problem is written in the two words—school support. While some headway is being made in school support, public-school taxation is, comparatively speaking, so new in the State that many of the public—particularly those persons who have been educated in private institutions—hardly yet

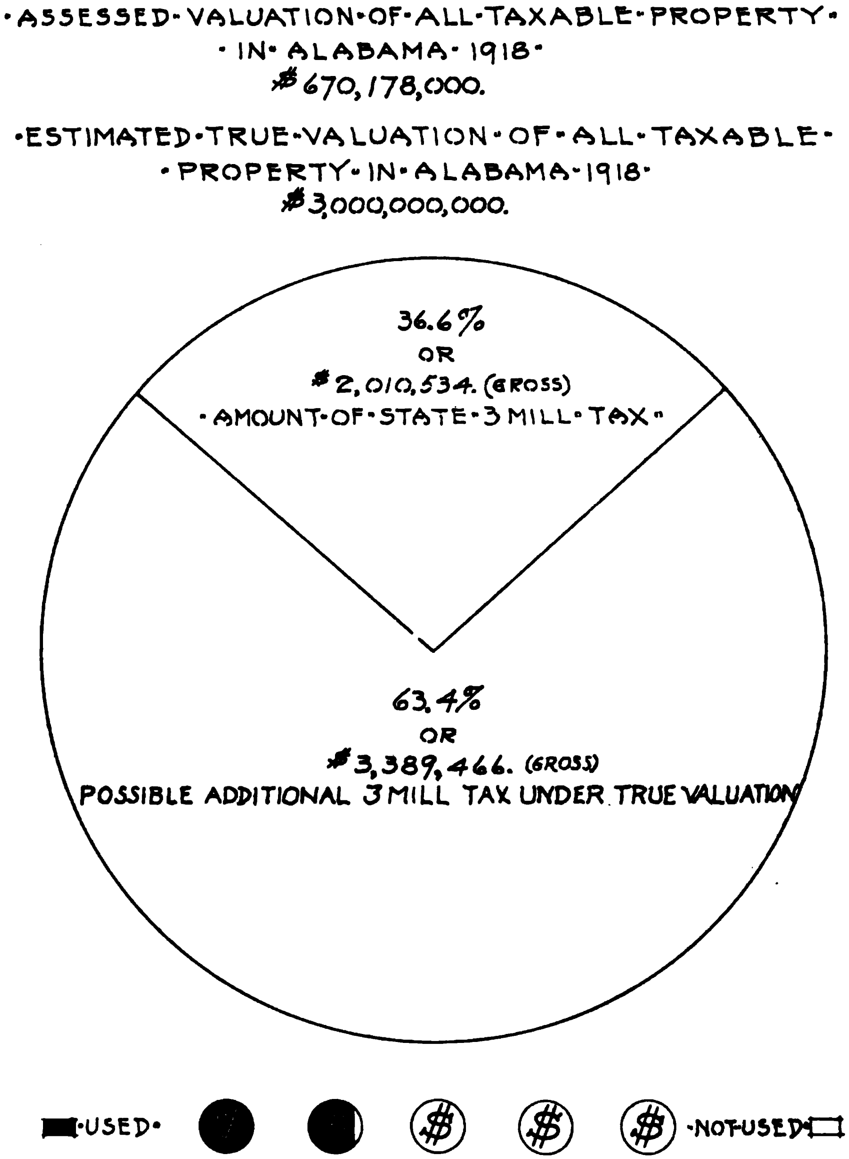


FIG. 48.

realize their full responsibility and opportunity in this matter. In such counties as Jefferson, Mobile, and Montgomery, with sufficient funds at their disposal, rural as well as urban schools are being rebuilt and are becoming as excellent as can be found anywhere. These schools are already reacting favorably on the agricultural and industrial prosperity of their several communities. Other counties are less well situated, because they lack ample funds for such progressive enterprises.

Alabama is just passing from an old order of things, and is only just beginning to utilize the abundant riches lying latent in its soil, and rock and water. The first step toward full utilization of this wealth must be a liberal investment in training for leadership in these several fields of activity. That Alabama is amply able to do more for education was shown in Chapter I. Only the briefest reference to its financial ability is therefore necessary.

The following table gives the true and assessed valuation of Alabama property by decades since 1880:

TABLE 97.—*True and assessed valuation of Alabama property.*[1]

Year.	Estimated true value of all taxable property by United States Census Bureau.	Same per inhabitant.	Assessed value of all taxable property.	Assessed valuation. What per cent of true value.
1880	$428,000,000	$339	$122,867,000	28
1890	622,800,000	411	258,980,000	42
1900	774,700,000	424	420,000,000	54
1910	1,825,000,000	854	420,000,000	23
1912	2,127,000,000	912	656,807,000	31
1918	[2] 3,000,000,000	1,250	670,178,000	22

[1] Social problems in Alabama. New York, Russell Sage Foundation, p. 7.
[2] Estimate based on the increase from 1900 to 1912.

The Russell Sage Foundation in a special study of Alabama social problems shows that the United States taxes have increased in the State from $463,000 in 1914 to approximately $30,000,000 in 1919. "If Alabama," continues the report, "could cheerfully meet the increase of taxes for Uncle Sam sixtyfold in four years, she can certainly make some increase for her own people now that national taxes are to be reduced." Certainly, Alabama is able to pay its own way and pay it well.

Alabama's social interests jeopardized.—It is not overstating facts to say that unless substantial financial relief is soon extended to education, this State will suffer great impairment through a lowering of standards and quality of school work. Conditions were bad enough before the world war; but they have become increasingly serious since then. The administrative and teaching staffs of the State's higher educational institutions, and the instructors of the teacher-training institutions and the public schools of every kind have struggled along on salaries that are wholly inadequate, and which are actually forcing many of Alabama's most efficient teachers to seek other employment or to accept teaching positions in other

States. The public schools need several thousand more trained teachers. Thousands of teachers have left the profession because they literally could not make financial ends meet. Much of the public-school plant is worn out and insanitary; the higher institutions are in need of equipment and money for urgently needed expansion. The State can not afford to permit the work that has resulted from years of planning and building in the educational life of Alabama to be endangered for lack of such funds as can be provided if the legislature will apply the remedies that are available.

How to remedy the situation.—A serious effort to reorganize the school finances should consider the following factors as essential to a just and democratic solution:

1. Enforcement of section 9 of the revenue code.
2. Legal enactment to place the assessment of all property in the hands of the State government.
3. Provision for equable inheritance and income taxes.
4. Legal enactment to provide for a searching study of the entire subject of taxation by experts.

The constitution of Alabama states specifically that "the income arising from the sixteenth section trust fund, the surplus revenue fund, until it is called for by the United States Government, and the funds enumerated in section 258 of this constitution, together with a special annual tax of 30 cents on each $100 of taxable property in the State, which the legislature shall levy, shall be applied to the support and maintenance of the public schools." This seems to mean full value assessment. A law was, however, later enacted basing the assessment of 60 per cent of a full and fair valuation. This law has been upheld as constitutional. But it is clearly evident from what has been shown elsewhere in this discussion that even the 60 per cent valuation clause is not enforced. If the suggestions made by the survey committee should be adopted the available revenue for education would be increased between two and three fold. This would satisfy every educational need in the State for years to come.

To this end, it would be necessary to reorganize the present agencies intrusted with the important task of property assessment. This would be made primarily a State function, under immediate direction of the governor of the State. Local property assessment should be directed by State assessors, and no local assessor should be an inhabitant of the county or community to be assessed by him. Suitable penalties should be provided to insure strict compliance with the law. Such tax commissions have already demonstrated in many States that it is possible to enforce a fair and equable system of taxation on rich and poor alike, instead of the unfair and undemocratic system now utilized in Alabama.

Income and inheritance taxes have already proved a most satisfactory measure at the hands of the Federal Government and certain State governments, for equalizing the tax burdens of the people. Most of the large incomes in the State are amassed from the riches of the public domain, as coal and iron, and water power. These and similar income-producing agencies should be taxed liberally in justice to the State at large.

Inheritances should also be taxed. Perhaps the most important of these in Alabama are inherited landed estates. Thousands of such large plantations lie practically fallow—held for speculative purposes. These great areas should be forced into productivity by placing upon them a "speculative lands' tax" similar to that of an act recently passed by the legislature of North Dakota, and, in addition thereto, an inheritance tax, if the land falls in this class.

The survey commission's attention has been called to many instances of flagrant abuse of the tax law, chiefly in relation to assessment of values. Coal and iron lands that are bonded for millions of dollars are known to have been assessed as agricultural lands at the paltry valuation of a few thousand dollars. Farms that were recently sold at a good price are listed on the tax books at less than one-tenth of this value. Such cases, unfortunately, are not isolated instances of a vicious practice, but are part of a common system. It is accordingly recommended that a scientific study of the whole field of taxation be made by experts who shall propose to the State an equable basis for listing and assessing property and apportioning the tax burden among all its citizens.

The recommendations summarized.—The survey committee is convinced that the stability and future growth of the public school system in Alabama demand certain definite modifications in the prevailing system of school support. To this end it recommends:

1. The reestablishment of a permanent productive educational fund, through the conversion of the accumulated paper obligations, by setting aside annually for a period of years a certain sum of money from the general treasury of the State or other source, until the obligation is fully liquidated. To this shall be added from time to time all incomes from rents, sales, royalties, etc., on the unsold lands now belonging to the schools of the State. These funds shall be administered and invested in State and Federal securities by a State board of which the State superintendent of education shall be the chairman.

2. The release of the $250,000 withheld from the present legislative appropriation of $600,000, at the earliest moment that the condition of the treasury will justify.

3. The passage of an amendment to the State constitution to provide a new basis on which to distribute the general educational fund,

as follows: (*a*) One-half of the entire fund to be apportioned to the several counties, two-thirds of this one-half on the basis of aggregate daily attendance in all the schools of the county, figured on the attendance records for the year last preceding, and one-third of this one-half on the total number of teachers employed in the county; and (*b*) the remaining one-half of the fund to be entrusted to the State department of education (State board of education) for apportionment among the schools of the State as awards for good work, and as direct aid to needy school districts.

4. The reapportionment of all State and county school funds by the county boards of education between county and city schools, on the principle of aggregate daily attendance and the number of teachers employed, and in no other way whatever; provided, that the basis of total school population shall be used in case the legislature fails to pass on the attendance principle.

5. The dicontinuance of the nine district agricultural schools and the establishment in their stead of six new agricultural schools of secondary rank, to receive State support to the amount of not less than $20,000 per annum.

6. The passage of the necessary legislation to permit all incorporated school districts of 1,000 population and over to issue bonds for extraordinary school purposes.

7. The adoption, by constitutional amendment, of a permanent millage tax for the maintenance of the University of Alabama, the Alabama Polytechnic Institute, the Alabama Girls' Technical Institute, the four class A normal schools, and such other normal schools as may hereafter be established, and the A. & M. College for Negroes—to be apportioned according to the needs of each institution, to supplant the present legislative appropriations—all of which, however, shall be in addition to all incomes on endowments, trust funds, etc., which may now form a definite part of the support of one or all of these schools.

8. The increase of the annual State appropriation to county high schools from $3,000 to a minimum of $4,000, provided that no such school shall hereafter receive any State aid whatever unless the State money is duplicated dollar for dollar from county funds.

9. The increase of State support for the colored normal schools, and direct State support for county training schools for colored teachers.

10. The reorganization of the school finances by (*a*) strict enforcement of section 9 of the Revenue Code; (*b*) legal enactment to place the assessment of all property under direct control of the State government; (*c*) provision for equable income and inheritance taxes, and (*d*) provisions for a searching study of the entire subject of taxation in the State.

Chapter XXIV.

SUMMARY OF THE MOST IMPORTANT RECOMMENDATIONS CONTAINED IN THE FOREGOING CHAPTERS.

The outstanding needs of the Alabama school system may be summarized under three heads:

1. Greatly increased school support.
2. More efficient instructional and supervisory staff.
3. Better adjustment of all teaching agencies.

The general plans for improvement of the school system are embodied in the following legislative and administrative recommendations concerning:

1. State School Organization and Administration.
    - (*a*) Organization of a State Board of Education to have full charge and control of all public elementary schools and such other schools as are included in the discussions of the foregoing chapters, except the University of Alabama, the Alabama Polytechnic Institute, and the Alabama Girls' Technical Institute.
    - (*b*) Appointment of the State Superintendent of Education by the new State board of education.
    - (*c*) Enlargement of the powers and duties of the State superintendent and State board of education in agreement with the details set forth in foregoing chapters.
    - (*d*) Organization of a State Council of Education to consist of members from the State board of education and of the faculties of the State's higher institutions of learning, with powers and duties as prescribed in foregoing chapters.
    - (*e*) Passage of such amendments to the constitution of Alabama as may be necessary to consummate the changes prescribed in foregoing chapters.
2. County Supervision of Schools.
    - (*a*) Requirement that all candidates for county superintendent, not including the present incumbents, shall hold at the time of the appointment to office a professional county superintendent's certificate. Such certificates shall be issued by the State department of schools on

2. County Supervision of Schools—Continued.

the basis of minimum academic and professional qualifications equivalent to graduation from the standard (class A) normal schools of the State, and at least three years' successful experience as teacher or supervisor in this or other States; ample evidence that the candidate (1) is an able administrator, (2) has strong personality and good character, (3) and has exceptional professional spirit.

- (*b*) Requirement that no person shall hereafter be appointed as assistant superintendent or subject supervisor who does not hold a State profesional certificate, valid in Alabama.
- (*c*) Appointment of an assistant county superintendent in each county employing 100 or more teachers, and a subject supervisor in each county for every 40 teachers or fraction thereof.
- (*d*) Maintenance of high standards among the county superintendents and their assistants—
  - (1) By holding an annual "school" of one week's duration under charge of the State superintendent for all the county superintendents; attendance to be made mandatory and all traveling and living expenses to be defrayed from county educational funds.
  - (2) By granting county superintendents and their assistants leave at full pay to attend summer school every second or third year.
  - (3) By furnishing at State expense each county superintendent for his own use, or the use of his assistants, one-half dozen or more of the leading educational books of the year.
- (*e*) Amendment of the present county board law to provide for separate boards of education in towns and cities of more than 1,000 population, not already provided for; and the right of such places to issue bonds for extraordinary educational purposes.

3. School Population, Enrollment, and Attendance.

- (*a*) Legal school age to include all children between 6 and 18 years, inclusive, but no person older than 18 years should be excluded from school.
- (*b*) School entrance age to be changed from 7 years to 6 years.
- (*c*) Provision for apportioning the State school fund on some basis other than the school population.

3. School Population, Enrollment, and Attendance—Continued.
    - (*d*) Provision for a chief attendance officer as member of the State department of education.
    - (*e*) Changes in the compulsory attendance law as follows:
        - (1) Removal of the 80-day and 60-day attendance minimum and requirement that normal children attend school throughout the regularly provided school term.
        - (2) Issuance of work permits only to pupils who have completed the fourth grade and can furnish satisfactory evidence thereof.
        - (3) The safeguarding of the law by limiting its exemptions as prescribed in Chapter VI.
    - (*f*) The perfection and use of a system of records by the State department of education for transferring pupils from community to community to make evasion of school attendance impossible.
    - (*g*) The lengthening of the school year for white children to 9 months and for colored children to a minimum of 6 months.
    - (*h*) The gradual reorganization of all schools as "all-year" schools in charge of professional teachers.
4. Rural Schools.
    - (*a*) School consolidation encouraged through State aid.
    - (*b*) Employment of assistants to the county superintendent in the supervision of rural schools. A State bonus from the State for each supervisor provided not exceeding one-third of the total salary, the remainder to be paid by the county board of education.
    - (*c*) Minimum qualifications for teachers, educational and professional, to be established through the enactment of the minimum salary law recommended in chapter 18.
    - (*d*) Approval of all school sites, size of grounds, kind of building and equipment by the State school architect appointed by and acting under the direction of the State board of education.
    - (*e*) The reorganization by the State board of education of the school system on the 6–3–3 plan.
5. Negro Education in Rural Sections.
    - (*a*) Apportionment of a larger share of the public school funds to Negro schools.
    - (*b*) Such increase of salaries of Negro teachers as will encourage persons of ability to enter and remain in the service of the schools.

5. Negro Education in Rural Sections—Continued.
    - (*c*) Increase in the number of Negro teachers to secure a better ratio of teachers to pupils.
    - (*d*) The enforcement of the compulsory education laws to apply to all children of school age, both white and colored.
    - (*e*) Provision of State aid for county training schools on the basis of $750 for each school to match the $750 appropriated by the county board of education for maintenance of this kind of school.
    - (*f*) Increase of State appropriation to the Agricultural and Mechanical College to the amount of the Federal Government's aid, and provision for modern dormitories and an academic building.
    - (*g*) Provision for the eventual removal of the State normal school at Montgomery, and its relocation on a tract of at least 150 acres of land.
    - (*h*) If the State finds it undesirable to carry out recommendations (*f*) and (*g*), the two schools to be consolidated and an agricultural and mechanical normal school to be established instead at such place as will be most accessible to the large body of the Negro population of the State; the school to have at least 150 acres of good agricultural land and ample provision for boarding and lodging these students.
6. Village and Town Schools.
    - (*a*) Continuance of the present plan of placing towns of less than 2,000 population under the control and management of the county board of education.
    - (*b*) Encouragement of the levy of local taxes in all village and town districts to enable the school board to discontinue the practice of charging tuition fees.
    - (*c*) Limiting the smaller village to 9 grades of school work. Organization of the seventh, eighth, and ninth grades as junior high school. Organization of the larger town schools on the 6–3–3 plan.
7. District Agricultural Schools and County High Schools.
    - (*a*) Discontinuance of State appropriations to the schools at Jackson, Abbeville, Sylacauga, Athens, and Wetumpka, and return of the property of these schools to the local authorities; or
    - (*b*) Maintenance hereafter of only four agricultural schools of secondary rank to be located at the present sites of the district agricultural schools at Hamilton, Albert-

7. District Agricultural Schools and County High Schools—Contd.
   ville, Blountsville, and Evergreen, or their relocation on bids from suitable communities from the State at large.
   - (*c*) Provision of a State appropriation for each of these schools of not less than $20,000 per annum.
   - (*d*) The increase of State aid to county high schools to a minimum of $4,000 per annum, provided that no such school shall receive any aid from the State which is not duplicated dollar for dollar from county or local funds.
   - (*e*) The discontinuance of the State appropriation now made to the Northeast Alabama Agricultural Institute at Lineville, with provision for turning the school property over to the local community.
8. City Schools.
   - (*a*) Such enlargements of the scope and power of city boards of education as will enable them—
     - (1) To call elections for the issuance of school bonds and the levying of local taxes.
     - (2) To purchase school sites, approve building plans, and erect buildings.
   - (*b*) Provision by which money furnished by the State to the city schools shall be—
     - (1) Sent directly to the city school boards.
     - (2) Apportioned on some definite basis, in order that the city may have a clear idea from year to year regarding the amount of financial help it will receive from the State.
   - (*c*) Taxation to the legal limit for school support in all cities which have not already reached this limit.
   - (*d*) Provision for the increase of property assessments until they shall at least reach the percentage of value provided for in the statute on that subject.
   - (*e*) The abolition by law of the practice of charging fees for attendance at public schools.
   - (*f*) Substantial increase in the salaries of teachers in every city of the State.
   - (*g*) Greater freedom to city boards in the matter of selecting textbooks suited to the special needs of city schools.
   - (*h*) Provision that all public school buildings in cities shall be—
     - (1) Built as nearly fireproof as is practicable.
     - (2) Built with reference to the best and most modern ideas of heating, lighting, and ventilation.
     - (3) Built with auditoriums or assembly rooms.

8. City Schools—Continued.
    - (*h*) Provision that all public school buildings in cities shall be—Continued.
        - (4) Built on the unit type, so that they can be added to as need arises.
        - (5) Constructed with due reference to the widest possible use by the community as a whole.
        - (6) Situated on 5 acres of school ground, in the case of an elementary school, or on 10 acres in case of a high school, and in no case on less than a full city block.
        - (7) Made as attractive as possible by design, by careful upkeep, and by such devices as flowers, window-boxes, etc.
        - (8) Designed after consideration has been given to the one-story type of school architecture for elementary schools.
        - (9) Equipped with movable tables and chairs in first-grade rooms and with movable desk chairs in high schools.
    - (*i*) Provision in the course of study for:
        - (1) A greater amount of physical training.
        - (2) Greater stress on education in health subjects.
        - (3) Greater flexibility to meet the demands of the individual child·
        - (4) Greater flexibility to meet the needs of different communities.
        - (5) More industrial work, preferably in cooperation with mills, or other predominant local industries.
    - (*j*) Promotion.
        - (1) Semiannually or oftener.
        - (2) Upon a basis including more than mere standing upon written examinations.
        - (3) In high schools, by subjects instead of by grades.
    - (*k*) Extension of the compulsory-attendance period to cover the entire school year, and better enforcement of the law.
    - (*l*) Better and more provision for activities along school extension lines, including night schools, afternoon classes, part-time schools, etc.
    - (*m*) Lowering of the legal entrance age from 7 to 6 years.
    - (*n*) Reorganization of the State course of study upon the 6–3–3 basis.

8. City Schools—Continued.
    - (*o*) Provision that schools for Negroes should:
        - (1) Have a term of not less than six months.
        - (2) Be housed in buildings that are safe, decent, sanitary, clean, comfortable, and sufficient in number.
        - (3) Provide adequate instruction in reading, writing, and arithmetic, and in such of the industries as the pupils will have the opportunity to engage in advantageously in after life.
        - (4) Pay their teachers enough to induce them to make proper preparation for their work.
    - (*p*) Legal provision for greater uniformity in the constitution of city boards of education. It is suggested that these boards shall consist of 7 members, each appointed or selected from the city at large. If not elected by the people, members of these boards should be appointed by the mayor and confirmed by the board of aldermen. They should hold office for a term of 7 years, the term of 1 member expiring each year. Members of boards should be so selected as to make sure that all classes of citizens and all the main industrial and professional interests are represented.

9. Schools for Defectives and Delinquents.
    - (*a*) Organization of a State Board of Social Welfare to have charge of all child-caring institutions in Alabama.
    - (*b*) Direction of all the educational work of the child-caring institutions to be under the management of the State board of education, or State department of education, which shall maintain a specific division for this purpose.
    - (*c*) Immediate establishment of a school for feeble-minded children.
    - (*d*) Substantial increase in per capita support of all these institutions and liberal funds for enlargement and repairs.

10. Eradication of Illiteracy.
    - (*a*) Strengthening the compulsory attendance law in accordance with recommendations in Chapter VI;
    - (*b*) Enactment of legislation to promote Americanization by requiring school attendance of all persons above compulsory attendance age, and below 21 years, who do not now speak, read, and write the English language, until completion of the fourth grade of the public schools or an equivalent requirement.
        - (1) Provision for the establishment and maintenance of evening schools and part-time schools for this purpose under the direct supervision of the State department of education.

10. Eradication of Illiteracy—Continued.
    - (*c*) Enactment of legislation to encourage effective illiteracy work among adults under direction of the State department of education, and maintained by funds voted by the legislature.
    - (*d*) Appropriation of not less than $25,000 annually for the next quadrennium for the purpose of making such legislation effective.
11. Health and Physical Education.
    - (*a*) Establishment of distinct fields of activities defining and recognizing the functions of the boards of education and health, respectively.
    - (*b*) Employment of a school health supervisor by each county board of education upon a 12 months' basis.
    - (*c*) The organization, supervision, and direction of health and physical education in the several counties by a State health supervisor, working under the direction of the State board of education.
    - (*d*) The enactment of a modern physical education law for the State in accordance with suggestive legislation outlined in Chapter XVI.
12. School and Home Gardening.
13. Teachers and Their Certification.
    - (*a*) Improvement of teaching conditions by—
        - (1) Establishing reasonable minimum salaries for all teachers;
        - (2) Scaling all teachers' salaries to the grade of certificate held, thus placing a premium on special preparation.
    - (*b*) Requirement of higher teaching qualifications by—
        - (1) Increasing gradually the entrance requirements of the State normal schools and lengthening their study courses;
        - (2) Discontinuing the issue of certificates on examination as soon as the normal schools, the Alabama Girls' Technical Institute, the school of education in the University of Alabama, department of education of the Alabama Polytechnic Institute, and other teacher-training institutions have become fully equipped to supply all the professional teachers required;
        - (3) Placing the minimum requirement for permission to teach at graduation from an accredited four-year high school, or its equivalent, and, in

13. Teachers and Their Certification—Continued.
    - (*b*) Requirement of higher teaching qualifications by—Contd. addition, at least one year's professional study, acquired at a professional school for teachers. The standard to go into effect not before September, 1923.
    - (*c*) Increase the supply of professional teachers by—
        - (1) Organizing teacher-training departments in the county high schools and other accredited high schools which meet the requirements of the State department of education; the schools to receive State aid.
        - (2) Establishing well-equipped departments for rural teachers at all the normal schools.
        - (3) Enlarging the facilities of the Alabama Polytechnic Institute to prepare teachers of general agriculture and teachers of vocational agriculture and home economics.
        - (4) Granting State bonuses to teachers as rewards for long service in a single school community;
        - (5) Establishing a retirement fund for teachers.

14. Preparation of Public School Teachers.
    - (*a*) Requirement of professional training as a prerequisite to the issuance of teacher certificates, the standard to be raised gradually to avoid teacher shortage, and protection to be afforded experienced and skilled teachers now in service.
    - (*b*) Requirements that members of boards of control of an institution be not residents of the county in which the institution is located.
    - (*c*) The establishment of a pension and emeritus system for all teachers.
    - (*d*) The discontinuance of the class B normal schools, which may profitably be converted into county high schools.
    - (*e*) The accrediting of the State normal school (colored) at Montgomery and Tuskegee Institute, the addition of a school, farm buildings, and equipment for the former, and increased appropriations for both.

15. Higher Education.
    - (*a*) A large increase in the appropriations for the college of agriculture of the Alabama Polytechnic Institute.
    - (*b*) Emphasis by the Alabama Polytechnic Institute on the training of leaders in scientific agriculture and rural life.

15. Higher Education—Continued.

(*c*) The gradual differentiation of the programs of engineering education of the University of Alabama and the Alabama Polytechnic Institute as follows:

1. Both institutions to continue to offer chemical, civil, electrical, and mechanical engineering.
2. The University of Alabama to relate its work directly to the needs of the mining and industrial district, and to develop commercial and industrial engineering, hydraulic engineering, and sanitary engineering.
3. The Alabama Polytechnic Institute to emphasize investigation and training in highway engineering, agricultural engineering, and textile engineering.
4. The State council of education to determine the advisability of continuing degree curricula in architecture and architectural engineering.

(*d*) Increased appropriations for the support of engineering education at both the Alabama Polytechnic Institute and the University of Alabama.

(*e*) A large increase in the appropriations for the school of education of the University of Alabama, to provide additional instructors; the provision of an educational building; the provision of a practice school under the direction of the school of education; and the continuance of teacher training in trades and industries under the direction of this school.

(*f*) An increase in the support of the school of agricultural education at the Alabama Polytechnic Institute, to cover practice-teaching facilities and additional instructors.

(*g*) The appropriation of at least $10,000 a year to both the University of Alabama and the Alabama Polytechnic Institute for the maintenance of summer schools.

(*h*) The continued recognition of the graduates in home economics, music, and commercial branches of the Alabama Girls' Technical Institute as candidates for high-school positions in these subjects.

(*i*) (1) The early abandonment of the attempt to continue for the present a four-year medical school in connection with the University of Alabama, and the transfer of the first two years of medical education from Mobile to Tuscaloosa. (2) Pending the time when the Mobile school can be legally discontinued, the strengthening of

15. Higher Education—Continued.

the first three years of its work only. (3) The maintenance of two centers of postgraduate teaching in medicine, one at Mobile and one at Birmingham, and the proper support of these centers.

(*j*) The concentration of education in pharmacy for the present at the Alabama Polytechnic Institute.

(*k*) Adequate appropriations for the support of the college of veterinary medicine at the Alabama Polytechnic Institute.

(*l*) The placing of the college of law of the University of Alabama on a standard basis, and the appropriation of sufficient money for its support.

(*m*) The approval of the estimates for work in commerce at the University of Alabama, and a study of the needs in higher commercial training by the State council of education.

(*n*) The establishment of a department of forestry at the Alabama Polytechnic Institute.

(*o*) (1) The establishment of a division of home economics at the Alabama Polytechnic Institute, and the transfer to that institution of the Smith-Hughes work in the training of teachers of home economics and the consequent expansion of the school of agricultural education to include the training of teachers in home economics. (2) The abandonment of the plan to develop the Alabama Girls' Technical Institute into a four-year college of liberal arts for women, and the rehabilitation of its original program as a technical institute.

(*p*) The admission to the general course at the Alabama Polytechnic Institute of only such students as meet the full entrance requirements without conditions.

(*q*) Appropriations sufficient to cover an immediate increase of at least 50 per cent in instructional costs at the college of arts and sciences of the University of Alabama, together with provision for continued support to keep pace with anticipated growth in enrollments.

(*r*) The development of definite program of research by the University of Alabama and the Alabama Polytechnic Institute, and the inclusion of estimates to cover these programs in their future budgets.

(*s*) The assumption by the State of a larger financial responsibility for the program of agricultural extension of the Alabama Polytechnic Institute than is required to

16. Financing the Public Schools—Continued.
    - (*d*) The reapportionment of all State and county school funds by the county boards of education between county and city schools, on the principle of aggregate daily attendance and the number of teachers employed, and in no other way whatever; provided, that the basis of total school population shall be used in case the legislature fails to pass on the attendance principle.
    - (*e*) The withdrawal of State support from the five poorly functioning district agricultural schools and apportionment of these funds among the remaining four schools; or the withdrawal of State support from all the nine district agricultural schools and the reapportionment of these funds among the county high schools on the conditions outlined in Chapter XI.
    - (*f*) The adoption, by constitutional amendment, of a permanent millage tax for the maintenance of the University of Alabama, the Alabama Polytechnic Institute, the Alabama Girls' Technical Institute, the four class A normal schools, and such other normal schools as may hereafter be established, and the Agricultural and Mechanical College for Negroes—to be apportioned according to the needs of each institution and to supplant the present legislative appropriations—all of which, however, shall be in addition to all incomes on endowments, trust funds, etc., which may now form a definite part of the support of one or all of these schools.
    - (*g*) The increase of the annual State appropriations to county high schools from $3,000 to $4,000, provided that no such school shall hereafter receive any State aid whatever unless the State money is duplicated dollar for dollar from county funds.
    - (*h*) The increase of State support for the colored normal schools and direct State support for county training schools for colored teachers, as outlined in Chapters XI and XIII.
    - (*i*) The reorganization of the school finances by (1) strict enforcement of section 9 of the revenue code; (2) legal enactment to place the assessment of all property under direct control of the State government; (3) provision for equable income and inheritance taxes; and (4) provision for a searching study of the entire subject of taxation in the State.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 42

MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

JUNE, 1919

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

Compiled by the Library Division, Bureau of Education.

CONTENTS.—Educational history and biography—Current educational conditions—Educational reconstruction—Educational theory and practice—Educational psychology—Educational tests and measurements—Special methods of instruction—Special subjects of curriculum—Kindergarten and primary school—Rural education—Secondary education—Teachers: Training and professional status—Higher education—School administration—School management—School architecture—School hygiene and sanitation—Physical training—Social aspects of education—Child welfare—Religious education—Manual and vocational training—Vocational guidance—Vocational tests: Army personnel—School gardens—Commercial education—Professional education—Civic education—Americanization of immigrants—Military training—Education of women—Negro education—Education of blind and deaf—Exceptional children—Education extension—Libraries and reading—Bureau of Education: Recent publications.

NOTE.

The record comprises a general survey in bibliographic form of current educational literature, domestic and foreign, received during the monthly period preceding the date of publication of each issue.

This office can not supply the publications listed in this bulletin, other than those expressly designated as publications of the Bureau of Education. Books, pamphlets, and periodicals here mentioned may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization. Many of them are available for consultation in various public and institutional libraries.

Publications intended for inclusion in this record should be sent to the Library of the Bureau of Education, Washington, D. C.

With this issue the record suspends publication for the summer. The next number will be dated September, 1919.

EDUCATIONAL HISTORY AND BIOGRAPHY.

846. **Dobbs, A. E.** Education and social movements 1700–1850. London, New York, Longmans, Green, and co., 1919. xiv, 257 p. 8°.

Part of a history of English popular education in modern times, with special reference to movements of democratic origin or tendency. Writer says that social changes have given a sanction and impetus to the demand for different forms of instruction, and that the lines on which their organization develops are profoundly affected by social tradition.

847. **Jernegan, Marcus W.** The educational development of the Southern colonies. School review, 27: 360–76, May 1919.

First of a series of articles dealing with education in Southern colonies. Growth of the public school system.

848. **Powers, William H.** History of education in Dakota territory. *In* South Dakota. Fourteenth biennial report of the superintendent of public instruction, 1916–1918. Pierre, State publishing company [1918] p. 19–35.

849. **Reisner, Edward H.** Democracy and nationalism in education; syllabus and readings for a course in history of education from the French Revolution to the present time, with an introduction by Paul Monroe. New York city, Teachers college, Columbia university [1919] 29 p. 8°. (Teachers college, Columbia university. Teachers college syllabi, no. 9)

Also in Teachers college record, 20: 133–60, March 1919.

850. **Shaw, Albert.** A teacher and leader. American review of reviews, 59: 480–82, May 1919.

A sketch of the life and work of the late Prof. Samuel T. Dutton.

CURRENT EDUCATIONAL CONDITIONS.

GENERAL AND UNITED STATES.

851. **Bryan, William Lowe.** Vocational education plus humanistic education. Indiana university alumni quarterly, 6: 133–38, April 1919.

Also in Educator-journal, 19: 483–87, May 1919.

Summary of address given before the Governor's Reconstruction conference on November 26, 1918, at Indianapolis, together with some additional illustrations.

Speaks of the proposed Department of education and Federal control of education.

852. **Ford, Guy Stanton.** The schools as they have affected government activities. American school, 5: 77–78, March 1919.

An address delivered before the N. E. A. Department of superintendence convention, February 1919.

The effect of the schools on government war activities.

853. **Gray, Herbert Branston.** America at school and at work. London, Nisbet & co. ltd. [1918] xx, 172 p. 12°.

Written during the spring and summer of 1917, in the course of an educational mission of six months in the United States undertaken by the author.

854. **Hancock, Harris.** The defective scholarship of our public schools. The pernicious influence of the colleges for teachers. School and society, 9: 552–56, May 10, 1919.

The writer says "there is no wonder that at the present time our national education, due to the agencies and guidance of these people who are preaching the new education and the easy way in the so-called teachers' colleges, is bordering on a national travesty."

855. **James, Edmund J.** A national program of education. American school, 5: 72–73, 80, March 1919.

An address delivered before the Department of superintendence, N. E. A., February 1919.

The president of the University of Illinois shows the need for a Federal department of education.

856. **Keyser, Cassius J.** A word about the new wisdom and its obligations. Columbia university quarterly, 21: 118–24, April 1919.

The demand for a certain large intelligence, imagination, sympathy, understanding and independence of judgment in world affairs.

857. **Sachs, Julius.** The Gary schools. Columbia university quarterly, 21: 109–17, April 1919.

Results of the survey made by the General education board. The Report discloses the absence of supervision in the Gary schools.

858. **Towner, Horace M.** Nation's aid to schools. Evening post magazine (New York), May 17, 1919, p. 1–2.

Representative Towner cites conditions which have caused a widespread demand for a Federal department of education, directed by a Cabinet officer.

FOREIGN COUNTRIES.

859. **Barlow, *Sir* Montague *and* Holland, Richard.** The education act, 1918, with notes and introductory chapters explanatory of the act; and of the relation of religious bodies to the act, with notes on some leading decisions under the Act of 1902 affecting denominational schools; also a reprint of the unrepealed sections of that act. [London] National society's depository [1918] 143 p. 6°.

860. **Blakesley, John H.** The meaning and the aims of education. Nineteenth century, 85: 766–81, April 1919.

Defines the difference between education and instruction. Conditions in England described. Deplores the placing of education on a strictly utilitarian basis.

861. **Kandel, I. L.** The financial basis of English education. School and society, 9: 487–91, April 26, 1919.

The report of the Education committee to the London county council on Education after the war: government grants and educational developments.

862. **Kandel, Jessie D.** Liberal tendencies in German education. Educational review, 57: 399–412, May 1919.

A translation of a summary of Kerschensteiner's Deutsche schulerziehung in krieg und frieden (Leipzig, 1916).

863. **Littledale, Harold A.** The soldier in the classroom. North American review, 209: 620–26, May 1919.

Describes work of the Education training scheme to prepare the British soldier for civil life.

864. **MacDougall, J. B.** Building the north. Toronto, McClelland & Stewart [1919] 268 p. illus. 8°.

A record of educational progress in Northern Ontario, which in some respects, notably as regards the consolidated school, has distanced the earlier settled portions of the province.

865. **Sakamoto, Kiyoshi.** English education in Japan. School news and practical educator, 32: 399–404, May 1919. illus.

The third article in a series.

866. Strength of Japanese officialdom, particularly in education. Journal of race development, 9 : 373–81, April 1919.

Says that Japan is educated according to the ideas of the ruling caste. The educational system is absolutely in the hands of the officials; the object, in the main, is to foster the patriotic cult.

867. **Thomas, Arthur A.** The education act, 1918; a handbook for the use of administrators, members of local education authorities, school managers and others interested in education, as well as for the legal profession, to which is appended the complete text of the act. London, P. S. King & son, ltd., 1919. 122 p. 12°.

868. **Thompson, J.** Intermediate education in Ireland. Journal of education and School world (London) 51: 290–92, May 1919.

Discusses the reform of intermediate education in Ireland. Based on the recent report of the Vice-regal committee on the conditions of service, etc., in Ireland.

EDUCATIONAL RECONSTRUCTION.

869. **Boyd, Paul Prentice.** Education after the war. Kentucky high school quarterly, 2: 5–19, April 1919.

The weaknesses of our schools as revealed by the war and their future lines of growth.

870. **Crouzet, Paul.** La vie pédagogique. Revue universitaire, 28: 164–72, March 1919.

Contains reviews of two recent books dealing with educational reconstruction in France.

871. **Fuess, Claude M.** After-war reflections of a teacher. Phillips bulletin (Andover, Mass.) 13: 12–17, April 1919.

872. **Gosling, Thomas W.** Educational reconstruction in the junior high school. Educational review, 57: 576–86, May 1919.

Says that the elementary school and the senior high school are so strongly enmeshed in traditionalism that they can not recognize and respond to the newer ideas in education; reconstruction must begin in the junior high school.

873. **McAndrew, William.** Americanism at its source. Literary digest, 61: 36, 113–14, 118–19, 121, May 17, 1919.

This article is based on reports received from all parts of the United States, giving information concerning changes in schools due to the war.

874. **Snedden, David.** The outlook for modern language instruction after the war. Educational administration and supervision, 5: 210–17, April 1919.

Notes of an address delivered before the New York state modern language teachers' association, March 29, 1919.

875. **Sterrett, Mary C.** How the world war has influenced the teaching of geography. School and home education, 38: 186–88, May 1919.

Presented before the Central Illinois teachers' association, April 11, 1919.

EDUCATIONAL THEORY AND PRACTICE.

876. **Barnard, H. C.** The Port-Royalists on education, extracts from the educational writings of the Port-Royalists, selected, translated and furnished with an introduction and notes. Cambridge. At the University press, 1918. 276 p. 12°.

877. **Berry, T. W.** The training of youth. London, T. Fisher Unwin, ltd. [1919] 207 p. 12°.

Bibliography: p. 205–207.

878. **Brown, George A.** The new and the old in education. School and home education, 38: 180–84, May 1919.

Needed organization of science for the new education; humane science; and ideals and ideas in education.

879. **Burr, A. W.** The democracy of learning. Journal of education, 89: 479–82, May 1, 1919.

880. **Patri, Angelo.** Vers l'école de demain; souvenirs d'un maître d'école américain. Traduit de l'anglais par L. Herr; avec une préface de Ferdinand Buisson. Paris, Hachette et cie., 1919. viii, 248 p. front. (port.) 12°.

A French version of the author's A schoolmaster of the great city, New York, Macmillan, 1917.

EDUCATIONAL PSYCHOLOGY.

881. **Julliot, Charles Louis.** L'éducation de la mémoire. Paris, E. Flammarion, 1919. 223 p. 12°. (Bibliothèque de philosophie scientifique.)

882. **Richardson, Roy Franklin.** The psychology and pedagogy of anger. Baltimore, Warwick & York, 1918. 105 p. 12°. (Educational psychology monographs, no. 19.)

EDUCATIONAL TESTS AND MEASUREMENTS.

883. **Ashbaugh, Ernest J.** Iowa spelling scale. Iowa City, Iowa, The University, 1918. 16 p. 8°. (University of Iowa extension bulletin, first series no. 24, November 15, 1918. Bulletin no. 43)

A scale for the measurement of the spelling ability of second grade pupils.

884. ——— Organization and function of a bureau of educational research. School and society, 9: 577–84, May 17, 1919.

885. **Foote, John M.** Report on spelling in the city of Alexandria, Rapides Parish. Baton Rouge, La., 1919. 12 p. 8°. (Louisiana. State department of education. Bulletin no. 6, May 1, 1919)

886. ——— Supervision and educational measurements. Southern school work, 7: 385–87, April 1919.

Educational measurement in relation to supervision.

887. **Heilman, J. D.** A study in spelling. Greeley, Colo., State teachers college, 1918. 15 p. 8°. (Colorado state teachers college bulletin, ser. 18, no. 7, October 1918. Research bulletin no. 2.)

888. ——— A study in the mechanics of reading. Greeley, Colo., State teachers college, 1919. 21 p. 8°. (Colorado state teachers college bulletin, ser. 18, no. 12, March 1919. Research bulletin no. 4)

889. **Hollingworth, Leta S.** The psychological examination of poor spellers. Teachers college record, 20: 126–32, March 1919.

890. **Lyman, R. L.** Cooperative investigations in ninth-grade English. School review, 27: 325–44, May 1919.

Study based on data obtained from 59 schools in various parts of the country. Describes the "Jones test," "Ayres test," and "Noyes test."

891. **Monroe, Walter S.** A series of diagnostic tests in arithmetic. Elementary school journal, 19: 585–607, April 1919.

Says that "the teacher must recognize that not only do pupils of a group differ widely in ability, but also that each pupil is likely to possess each of a group of abilities in widely different degrees." Emphasizes the need which exists for a series of diagnostic tests.

892. **Renshaw, Samuel.** The abilities of pupils in Detroit prevocational classes. Journal of educational psychology, 10: 83–94, February 1919.

"Three hundred pupils were given the Stanford-Binet tests, the Trabue Completion tests the Kansas silent reading test, and the Starch arithmetic test. Pupils of the same age vary widely in linguistic, reading and arithmetical abilities. Only one pupil in four is receiving practical benefit in a direct way from the instruction in reading, geography, language, arithmetic, etc."

893. **Tolman, Edward Chace.** English and mathematical abilities of a group of college students. Journal of educational psychology, 10: 95–103, February 1919.

Eight group tests given to 70 college students. The results of the tests agreed with the state, ments of the students themselves as to whether they were better in English or in mathematics.

894. **Updegraff, Harlan.** Educational measurements. Current education, 23: 135–43, May 1919.

Reprinted from Pennsylvania. University. Bulletin, 18th series, no. 6, pt. 1, page 89.

895. The value of measurements. English journal, 8: 203–17, April 1919.

Two papers. The first by Flora E. Parker, on the Measurement of composition in English classes, is a report of a subcommittee of the High-school research department of the Detroit English Club, presented to the Club in May 1918. The second paper by S. A. Courtis on The uses of the Hillegas scale, is a reply to the first paper.

SPECIAL METHODS OF INSTRUCTION.

896. **Carson, Carl Hardin.** How to use films in the school. Educational film magazine, 1: 8–9, 31, May 1919.

Constructive suggestions on capitalizing the motion picture in assembly hall and classroom—facts, figures, and helpful hints for the teacher and the principal.

897. **Clark, A. Bess.** Another experiment in problem teaching. English journal, 8: 218–24, April 1919.

The effectiveness of the problem method in third-year high-school English work.

898. **Gerlough, L. S.** The high school history lecture. Education, 39: 481–90, April 1919.

Use of lantern slides in history lectures, etc.

899. **Harrington, H. F.** Teaching journalism in a natural setting. Educational administration and supervision, 5: 197–206, April 1919.

An application of the project method.

900. **Mackie, Ransom A.** History recitation socialized. Historical outlook, 10: 256–58, May 1919.

SPECIAL SUBJECTS OF CURRICULUM.

READING.

901. **Gray, William S.** Reading in the elementary schools of Indianapolis. Elementary school journal, 19: 608–27, April 1919.

Fourth paper of series. Discusses the broadening of experience through extensive silent reading (fourth, fifth, and sixth grades); independent application of reading ability to all phases of school work (seventh and eighth grades); and supervision of reading.

902. Journal of the New York state teachers' association, vol. 6, no. 3, April 15, 1919. (Reading.)

Contains: 1. J. P. O'Hern: The reading problem in the public schools as affected by actual measurements, p. 81-84. 2. W. S. Gray: The work of supervisors in improving instruction in reading, p. 84-88. 3. W. S. Gray: Methods of teaching reading—first, second and third grades, p. 88-94. 4. C. E. Kellogg: The theory and underlying principles of the Gray tests, p. 94-98. 5. T. A. Zornow: The use of the Gray oral reading test in a Rochester school and some deductions from the results, p. 99-107. 6. R. A. Spencer: Silent reading in the light of the Gray tests, p. 107-15.

SPELLING.

903. **Tidyman, Willard F.** The teaching of spelling. Yonkers-on-Hudson, N. Y., World book company, 1919. 178 p. 12° (School efficiency monographs)

LITERATURE.

904. **Baker, T. J.,** *pseud.* American literature in the colleges. North American review, 209: 781–85, June 1919.

Condemns the general neglect of American authors in the curricula of our universities and colleges, and the excessive attention given to minute study of foreign writers. Says that Americans must know American literature in order to know themselves.

905. **Furst, Clyde.** The study of literature. Educational review, 57: 361–75, May 1919.

Discusses literature from the standpoint of style.

906. **Kready, Laura F.** Teachers' college class IX. Fairy tale studies. Primary education, 27: 298–301, May 1919.

One of a series of 10 articles which have appeared in Primary education from September 1918 to date. Each article is a lesson to a teachers' college class upon some particular fairy tale and each article includes a fairy tale drama.

ENGLISH AND COMPOSITION.

907. **Ahles, Inez M.** Oral English. School bulletin, 45: 168–71, April 1919.

Read at the Elementary session of the Principals conference, Syracuse, December 27, 1918.

The importance of English to the individual, methods of vitalizing the teaching of literature, composition, and reading, and suggested course of readings of war literature.

908. **Barnes, Walter.** Schoolroom English. Journal of education, 89: 550–52, May 15, 1919.

Recommends the use of natural idiomatic conversational English of life rather than schoolroom English. Gives some examples of schoolroom English.

909. **East high school, Minneapolis, Minn.** Our speech drive. English journal, 8: 287–98, May 1919.

The general plan of English week in Minneapolis. A report made by the representatives of committees and principal.

910. **Eaton, Horace Ainsworth.** English problems after the war. English journal, 8: 308–12, May 1919.

A brief address to the English teachers' council for teachers in and near Utica, N. Y., November 16, 1918.

911. **Foerster, Norman.** Reconstructing the Ph. D. in English. Nation, 108: 747–50, May 10, 1919.

Proposes a new type of Ph. D. adapted to the humanist, alongside of the present type, which is adapted to the investigator only. A reply to this article by Lane Cooper appears in the Nation, 108: 911–13, June 7, 1919.

912. **Harris, Anna E.** The separation of composition and literature. Education, 39: 559–65, May 1919.

Says that English needs not to be separated from literature but to be connected with every subject in the high school.

913. **McNary, Sarah J.** Sex education: the opportunity of the teacher of English. English journal, 8: 242–47, April 1919.

Read at the New Jersey conference, conducted under the auspices of the U. S. Public health service and the U. S. Bureau of education at Newark, December 14, 1918.

914. **Mencken, H. L.** The American language; a preliminary inquiry into the development of English in the United States. New York, Alfred A. Knopf, 1919. x, 374 p. 8°.

Reviewed by Lawrence Gilman as "the book of the month" in the North American review, 209: 697–703, May, 1919. He calls it "a book that is almost always sound, shrewd, discerning, just."

915. **Schmidt, Austin G.** Education. The iniquitous copyright. America, 21: 81–82, April 26, 1919.

Shows how the Copyright act affects the English teacher. On account of the expense of recent literature the teacher is forced to use the older classics. Suggests an amendment to the Copyright act so that teachers may be able to get more recent literature for their classes at reasonable prices.

MODERN LANGUAGES.

916. French course of study. Modern language journal, 3: 300–324, 368–76, April, May 1919.

Second, third, and fourth years of high school French.

Written by members of the French department of the University high and elementary schools, University of Chicago.

917. **Havard, H.** L'enseignement du français dans les écoles élémentaires. Revue pédagogique, 74: 167–95, March 1919.

Compiled from the annual reports of the inspectors of the Academy of France, rendered in June 1918, which gave special attention to the teaching of French.

ANCIENT LANGUAGES.

918. **Clapp, Henry L.** The classicists and nature's law. Education, 39: 521–36, May 1919.

A plea for science teaching in elementary schools. Criticizes the classics.

919. **Dole, Nathan Haskell.** The study of the classical languages. Journal of education, 89: 535–40, May 15, 1919.

The writer thinks that Latin should be postponed until after a person has become thoroughly familiar with French, Italian or Spanish, and that it should be entirely eliminated from all the preliminary schools and also from college examinations.

920. **Florer, Warren Washburn.** The Offenburg and Freiburg resolutions, and the influence of the classics. School and society, 9: 547–52, May 10, 1919.

Read at the joint session of the Classical and Modern language conferences at Ann Arbor, Mich., March 26, 1918, the seventieth anniversary of the passing of the Freiburg resolution.

921. **Howe, Alice C.** A word to classical teachers. Bulletin of high points in the work of the high schools of New York city, 1: 17–20, April 1919.

This paper was written originally for the National security league, before the signing of the armistice.

The opportunity of the teacher of the classics to teach patriotism and citizenship.

922. **Kinnaman, J. O.** Latin in high school. School and home, 11: 12–14, April 1919.

After showing the necessity for studying Latin the writer says that its place is practically on a par with English and should not be studied as a subsidiary to English.

923. **McCrea, Nelson G.** Latin examinations as tests of intelligence. Classical journal, 14: 498–512, May 1919.

SOCIAL SUBJECTS.

924. **American historical association.** Preliminary report of the Committee on history and education for citizenship in schools. Historical outlook, 10: 273–81, May 1919.

The suggested course in history, correlated with civics, geography and reading, for the elementary schools.

925. **California state high school teachers' association.** One or two years of European history in high school. Historical outlook, 10: 282–98, May 1919.

CONTENTS.—I. A one-year course in European history, by Jane E. Harnett, p. 282–88.—II. Report of the subcommittee of the European history commission for the Peninsula district, p. 288–93.—III. Resolutions adopted by the Bay section, p. 293.—IV. Final report of the Commission appointed in 1917 to recommend a one-year course in European history.

926. **Hunt, Rockwell D.** Economics in the high school. Sierra educational news, 15: 239–42, May 1919.

GEOGRAPHY.

927. **Geographical association,** *Great Britain*. Geography in education, by members of the Geographical association, being a report of the results of discussions held during the short course in geography for secondary teachers, organized for the Board of education at the University college of Wales, Aberystwyth. London, George Philip & son, Limited, [etc., etc.] 1919. 45 p. 8°.

MATHEMATICS.

928. **Massachusetts teachers' federation. Committee on curriculum.** Report of the Committee on curriculum. Mathematics in the elementary school and the junior high school. Common ground, 1: 7–15, April 1919.

929. **Smith, David Eugene.** Number stories of long ago. Boston, New York [etc.] Ginn and company [1919] vii, 136 p. illus., plates. 12°.

The story of our numbers, of the world's attempts to count, of the many experiments in writing numerals, and of the difficulties encountered through the ages in performing our everyday computations—all written interestingly in nontechnical language for supplementary reading in the elementary school.

SCIENCE.

930. **Caldwell, Otis.** The Gary public schools. Science teaching. New York city, General education board, 1919. 125 p. plates, tables. 12°.

One of eight volumes of the Gary school survey made by the General education board.

931. **Miller, C. F.** A survey of the general science situation in Illinois. School science and mathematics, 19: 398–406, May 1919.

Read before the Central association of science and mathematics teachers, Chicago, November 30, 1918.

932. **Pool, Raymond J.** About high school and college botany. School science and mathematics, 19:487–500, June 1919.

933. **Shreves, Rolland M.** The aim of science. Education, 39: 566–72, May 1919.

Discusses the distinction between science and philosophy; and shows the importance of both in a well-rounded curriculum.

MUSIC.

934. **Music teachers' national association.** Studies in musical education, history and aesthetics. Thirteenth series. Papers and proceedings . . . fortieth annual meeting, St. Louis, December 30, 1918–January 1, 1919. Hartford-Conn., Pub. by the Association, 1919. 351 p. 8°. (William Benbow, secretary, 825 Elmwood avenue, Buffalo, N. Y.)

Contains: 1. Mrs. D. A. Campbell: The new citizen's work for music, p. 78–83. 2. Max Schoen: How may the musical needs of the rural community be met? p. 84–90. 3. D. A. Clippinger: Principles and problems of voice training, p. 115–20. 4. J. C. Wilcox: What the voice teacher must know, p. 129–35. 5. George Dickinson: A review of materials and methods in teaching music appreciation in the college, p. 190–203. 6. Osbourne McConathy: Teaching music theory in the public schools, p. 224–28. 7. M. Teresa Finn: Music theory in the grades, p. 229–32. 8. Mrs. J. T. Sleeper: Theory in the high school, p. 233–40. 9. J. R. Frampton: Harmony in the normal school, p. 241–47. 10. C. G. Hamilton: Nature and purpose of the school credit piano course, p. 284–90. 11. M. L. Swarthout: A consideration of the progressive series of piano lessons, p. 291–99.

935. **Myers, S. S.** Music in education. Southern school journal, 30: 6–9, April 1919.

The value of music in religious, social, industrial and commercial life and its value as a moral force in education.

936. **Schoen, Max.** Some notes on a scientific basis for music education. Education, 39 : 491–504, April 1919.

Gives a scheme of musical appreciation based on stages of development, also outline of a course in musical education formulated on stages of development.

937. **Shields, Thomas Edward.** The function of music in character formation. Catholic educational review, 17: 289–95, May 1919.

The value of music in the primary grades.

ELOCUTION.

938. **Malloy, Jeanette I.** Speech improvement and the correction of speech defects in the New York schools. Ungraded, 4: 167–71, April 1919.

939. **Wood, Charlotte Robertson.** High school dramatics. Illinois association of teachers of English bulletin, 11: 1–16, May 1, 1919.

KINDERGARTEN AND PRIMARY SCHOOL.

940. **Bagley, W. C.** The things that count. Kindergarten and first grade, 4: 169–71, May 1919.

Address given at the Kindergarten session of the Department of superintendence, N. E. A. Chicago, 1919.

The particular problem of the kindergartner is to inculcate basic morality and unfailing courtesy in the child.

941. **Drummond, Margaret.** Nursery schools. Contemporary review, 115: 451–60, April 1919.

A discussion of the kindergarten. Emphasizes the psychologic aspects of kindergarten education.

942. **Kilpatrick, William Heard,** *and others.* Horace Mann studies in primary education. Teachers college record, 20: 97–125, March 1919.

CONTENTS.—Introduction.—The theories underlying the experiment, by W. H. Kilpatrick, p. 99–106.—Specimen activities of the first grade, by Florence McVey Meadowcroft, p. 106–18.—First grade materials and stimuli, by Agnes Burke, p. 118–25.

Sets forth the underlying principles and describes certain experimentation in primary education that was begun in the Horace Mann school in 1916.

943. **Reed, Ivy Kellerman.** The three R's at four years old. Atlantic monthly, 123: 664–68, May 1919.

Story of the training of little Erik, the writer's son.

RURAL EDUCATION.

944. **Hanson, C. C.** The need of Federal aid in the improvement of public education, especially as concerns country schools and country life. 13 p. 8°.

A paper prepared and read before the National conference on rural education and country life called by the United States Commissioner of education, at Oklahoma City, May 1-3, inclusive, 1919.

SECONDARY EDUCATION.

945. **Armentrout, W. D.** The theory of the junior high school. Education, 39: 537-41, May 1919.

Discusses the difficulties confronting the junior high school.

946. **Bennett, G. Vernon.** The junior high school. Baltimore, Warwick & York, inc., 1919. 224 p. 12°.

Bibliography: p. 208-20.

CONTENTS.—I. The problems and the solution.—II. History of the movement.—III. Objections to junior high school answered.—IV. Effect of the junior high school movement upon the elementary grades.—V-VI. Courses of study.—VII. Principal and teachers.—VIII. Teaching in junior high schools.—IX. Administration of the junior high school.—X. Relation to senior high and junior college.—XI. An ideal junior high school.—Appendix: Junior high school courses of study.—Bibliography.

A guide for the study of the junior high school movement, full of suggestions, of arguments, and of enthusiastic hopes.

947. **Buffalo. University.** Intermediate schools. Buffalo, The University of Buffalo, 1919. 16 p. 12°. (University of Buffalo bulletin, vol. 7, no. 2, April 1919)

Contains: 1. E. C. Hartwell: The Buffalo plan, p. 5-13. 2. W. H. Pillsbury: The preparation of teachers for the intermediate schools, p. 13-16.

948. **Connecticut. State board of education.** Holding power of Connecticut high schools. Hartford, Conn., State board of education, 1919. 39 p. 8°. (High school bulletin 5, series 1918-1919)

Elimination of pupils in the high school and factors contributing to it.

949. **Cox, Philip W. L.** The Ben Blewett junior high school: An experiment in democracy. School review, 27: 345-59, May 1919.

A cooperative experiment in school administration wherein teachers and pupils are encouraged "to feel definite responsibility for developing their school."

950. **Hough, W. R.** Advantages of the double-six organization. School review, 27: 377-84, May 1919.

Reorganization of the upper six grades in Oakland city, Ind. Says that the six-six organization has many advantages over other types of organizations for the small or medium sized community.

951. **Lewis, Ervin E.** Survey of the high schools of Des Moines. Iowa City, The University, 1918. 64 p. 8°. (University of Iowa bulletin, first series no. 18, July 1, 1918. Extension division bulletin no. 37)

952. **Marsh, J. F.** A new course of studies for high schools. West Virginia school journal and educator, 48: 29-30, May 1919.

Outline of courses of study for the junior and senior high schools of West Virginia.

953. **Palmer, Jasper T.** The individual in the junior high school. Journal of education, 89: 429-31, April 17, 1919.

954. **Snedden, David.** Cardinal principles of education. School and society, 9: 517-27, May 3, 1919.

Based on the report of the Commission on the reorganization of secondary education entitled "Cardinal principles of secondary education." Subjects to examination and criticism the cardinal principles.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

955. **National education association.** Journal of proceedings of the fifty-sixth annual meeting . . . Pittsburgh, Pa., June 29–July 6, 1918. Journal of the National education association, 3: 421–89, March 1919.

This number contains the report of the Committee on teachers' salaries, tenure, and pensions, also published as a separate pamphlet.

956. **Bagley, W. C.** The status of the critic teacher. American school, 5: 42–43, 54, February 1919.

Read before the Normal department, National education association, February 25, 1919.

957. **Barber, Floyd R.** Standards by which school boards may judge applicants. Education, 39: 553–58, May 1919.

Gives an outline of standards by which applications for positions as teachers may be judged, summarized under the following heads: (1) Education; (2) Experience; (3) Health; (4) Character.

958. **Blodgett, Frederick H.** College training for teachers of agriculture. School and society, 9: 493–500, April 26, 1919.

Gives an outline of a four-year college course in agriculture for teachers.

959. **Chancellor, William E.** Health control for teachers—V. What is worry? Ohio teacher, 39: 318–20, April 1919.

The fifth paper in a series of articles which will be published soon in book form.

960. **Claxton, Philander Priestley.** Slight chance for educational progress without better salaries. School life, 2: 11, April 16, 1919.

A program of education urged by Commissioner Claxton in a letter to Miss Charlotte Rumbold, assistant secretary of the Cleveland Chamber of Commerce, written in response to a request for views on salaries and other problems. Thinks that teachers' salaries must be doubled and probably trebled—advocates less machinery and more freedom.

961. A code of ethics for the teaching profession. School and society, 9: 599–601, May 17, 1919.

Prepared by a committee of school men under the auspices of the University of Pennsylvania, April, 1919.

962. **Cortright, E. Everitt.** The teacher's job. American education, 22: 397–99, May 1919.

The personality and qualifications which should be possessed by a teacher.

963. **Donahey, A. V.** Who is robbing Ohio teachers? Ohio teacher, 39: 321–23, April 1919.

Says in conclusion that it is necessary to abandon legislative absurdities and the caprice of theorists and put an end to the constant additions of the fads and fancies of modern education. A plan must be devised that will insure a larger share of school revenue to the teachers and a smaller proportion for architectural display.

964. **Lull, H. G.** Preparation of high school teachers in degree-granting normal schools. Educational administration and supervision, 5: 184–88, April 1919.

Discussion of some of the problems connected with training high school teachers in degree-granting normal schools.

965. **Neill, Nellie D.** The rural teacher and the school board. Normal instructor and primary plans, 28: 62, 63, June 1919.

Some suggestions for rural teachers on their relationships with the school board. The necessity for cooperation.

966. **New Jersey. Pension and retirement fund commission.** Reorganization of New Jersey teachers' pension and retirement systems. Report . . . January 1919. [Newark, N. J., Bureau of state research, 1919] 24 p. 8°. (New Jersey. Chamber of commerce. Bureau of state research. Consecutive no. 13, 1919)

967. Ohio educational monthly, 68: 164–85, May 1919. (Ohio state teachers' retirement system)

Contains: 1. The Ohio state teachers' retirement system law, p. 164–76. 2. T. H. Winters: The evolution of the new retirement system, p. 176–82. 3. W. W. McIntire: A summary of the bill providing for a state teachers' retirement system, p. 182–85.

968. **Rugh, C. E.** Self-improvement of teachers, used in connection with directed teaching; education 201, education 223. Berkeley, University of California press, 1919. 60 p. 12°. (California. University. University high school bulletin no. 2)

969. **Stroebe, Lilian L.** The background of the modern language teacher. Education, 39: 573–79, May 1919.

Says that teachers must have access to the original sources of information and they must not study their subject from compilations in the English language.

970. **Sutton, C. W.** Shortage of teachers and teacher's salaries. American school, 5: 44, 51, February 1919.

Read before the National association of directors of educational research, Chicago, February 27, 1919.

971. **U. S. Federal board for vocational education.** Teaching as a vocation . . . Washington, Government printing office, 1919. 14 p. 8°. (Opportunity monograph. Vocational rehabilitation series no. 22.)

For disabled soldiers, sailors, and marines to aid them in choosing a vocation.

Issued in cooperation with the Office of the surgeon general, War department, and Bureau of medicine and surgery, Navy department.

HIGHER EDUCATION.

972. **Association of American colleges.** Addresses at fifth annual meeting [Chicago, Ill., January 1919] Association of American colleges bulletin, vol. 5, no. 3, April 1919.

Contains: 1. The colleges and our national ideals [by] E. J. James, p. 3–7; [by] W. A. Shanklin, p. 7–12; [by] C. W. Flint, p. 12–19; [by] S. A. Lough, p. 19–23; [by] J. C. White, p. 23–26; [by] W. H. Crawford, p. 26–29; [by] H. S. Pritchett, p. 29–34. 2. G. C. Nimmons: The need of architectural instruction in American colleges, p. 35–49. 3. Trevor Arnett: College financial statements, p. 50–68. 4. H. S. Pritchett: Insurance and annuities for college teachers, p. 69–85. 5. J. C. Dinsmore: Co-operative purchasing, p. 86–89. 6. I. C. A. Duriway: In what ways can the relations between colleges and universities be strengthened? p. 90–102. 7. E. B. Greene: Co-operation between colleges and secondary schools in promoting education for citizenship, p. 103–11. 8. J. H. MacCracken: Federal leadership in education, p. 112–22. 9. The colleges and international relations [by] J. A. Blaisdell, p. 123–31; [by] Fernand Baldensperger, p. 131–40. 10. Mlle. M. Marfaing: The relation between French "Enseignement secondaire" and American colleges, p. 141–43. 11. P. R. Kolbe: The colleges in the war and after, p. 144–57. 12. F. J. Morrow: Military training in the colleges, p. 158–69.

973. ——— Official records of fifth annual meeting . . . Chicago, Ill., January 9–11, 1919. Association of American colleges bulletin, 5: 1–46, March 1919. (Raymond M. Hughes, secretary, Miami university, Oxford, Ohio.)

Contains a report on academic credit for war service, international reciprocity, cooperative publicity, etc.

974. The Carnegie foundation for the advancement of teaching . . . [Concord, N. H., The Rumford press] 1919. 38 p. 8°.

Reprinted from a handbook of the public benefactions of Andrew Carnegie.

The organization and administration, studies in education, the reorganization of the pension system, etc. The pamphlet is reviewed by Joseph Jastrow, under the title of A complacent foundation, in the Nation, 108:862–64, May 31, 1919.

975. **National conference committee on standards of colleges and secondary schools.** Minutes of the twelfth conference . . . held at New York, March 24, 1919. 12 p. 8°.

Appendix: Academic credit for national service, p. 6–12.

976. **North central association of colleges and secondary schools.** Directory standards, statistical analysis and list of accredited schools . . . also the special study respecting the effect of the war on secondary schools in North central association territory. 1919. [47] p. 8°.

Gives interesting statistics concerning curricular changes, pupil elections, war organizations, teacher conditions, length of term, and buildings and equipments as affected by the war.

977. **Arthur, J. C.** Research as a university function. Science, 49 : 387–91, April 25, 1919.

Remarks on a survey of the research work in Purdue university.

978. **Brown, Elmer Ellsworth.** Shall the long college vacation be abolished? North American review, 209 : 815–19, June 1919.

In this article, Chancellor Brown reviews the considerations that move American educators to contemplate dispensing permanently with the long summer vacation, and also the arguments against such action. Whatever decision is reached on this point, he believes the stimulus of the war will result in a more thrifty use of institutions for higher education.

979. **Chapman, J. Crosby.** The selective process in English and American higher education. Education, 39 : 542–52, May 1919.

Says that while England has much "to learn from us with regard to the democratization of education, some of her methods are of interest to those concerned with the university education of this country, for it is on the university proper that American scholarship and scientific progress must depend."

980. **Hughes, W. H.** Junior college development. Educational administration and supervision, 5 : 189–96, April 1919.

Types of junior college, factors in the movement, traditional influences, changing conceptions, problems and general principles, the faculty, equipment and financial support, and advantages claimed.

981. **Kolbe, Parke Rexford.** The colleges in war time and after; a contemporary account of the effect of the war upon higher education in America; with an introduction by Philander P. Claxton. New York, D. Appleton and company, 1919. xx, 320 p. illus. 12°. (Problems of war and of reconstruction)

982. **McVey, Frank L.** Research as a university function. Kentucky high school quarterly, 5 : 1–4, April 1919.

Delivered before the Lexington section of the American chemical society, January 29, 1919.

983. **Neilson, W. A.** The Smith college experiment in training for psychiatric social work. Mental hygiene, 3 : 59–64, January 1919.

984. **Patterson, David L.** Growth of democracy in university and college administration. Graduate magazine of the University of Kansas, 14 : 195–201, April 1919.

Speaks of some of the democratic tendencies in college administration in schools throughout the country, and of the development of democracy in the University of Kansas.

985. **Van Dyke, Paul.** The college man in action. Scribner's magazine, 65 : 560–63, May 1919.

Services of college men as soldiers in the great war.

SCHOOL ADMINISTRATION.

986. **Avery, Lewis B.** State-printed textbooks in California. Elementary school journal, 19 : 628–33, April 1919.

987. **Blakely, Paul L.** Senator Smith's Prussian school. America, 21 : 134–35, May 10, 1919.

Governmental control and the Smith bill for a Department of education.

988. **Paulus, G. M.** How shall we improve the schools? Freedom in the schoolroom? Popular educator, 36 : 494–96, May 1919.

Criticises supervision in the schools, showing the effect of excessive supervision and wrong methods of supervision on teachers, on children, on instruction and on the school as a whole.

989. **Weet, Herbert S.** The necessity and difficulties of supervision in a city school system. Ungraded, 4 : 155–60, April 1919.

SCHOOL MANAGEMENT.

990. **Cooper, Homer E.** Another study of retardation. Educational administration and supervision, 5: 177–83, April 1919.

The results of an investigation showing that students who are graduated from four year high schools in less than four years are more promising for college than those requiring four or more years.

991. **Cooper, Starr G.** Teaching students how to study. Educational review 57 : 387–98, May 1919.

Says it is a waste of time to teach high school students a science of study, as they know but little of psychology and logic.

992. **Hickle, Carey.** Supervised study and individual opportunity. Porto Rico school review, 3: 25–35, May 1919.

Discusses methods of promotion and suggests a plan of individual advancement.

*993. **Kane, Pa. Board of education.** [Pamphlets on different phases of school work] Kane, Pa., Board of education, 1918–1919. 3 v. 8°.

H. O. Dietrick, superintendent.

1. A comparative study of child progress, 4 p.—2. Do you hear the children crying, 5 p.—3. Measurements, general or specific? 4 p.

994. **O'Neil, W. Jerold.** Attitude, atmosphere and artistry. Popular educator, 36 : 486–87, 532, 534, May 1919.

The attitude of the teacher, atmosphere and artistry of the schoolroom and the effect of these three "A's" on the uplift of schoolroom work.

995. **Turner, Kate E.** The question of home work. Bulletin of high points in the work of the high schools of New York city, 1 : 4–6, April 1919.

Does not approve of home study for high school pupils. Says that home work as imposed to-day upon the average pupil is a contributory cause toward the lack of time to socialize the family.

996. **Wheeler, Benjamin Ide.** Commencement address. University of California chronicle, 21 : 114–20, April 1919.

Delivered at the fifty-fifth commencement, May 15, 1918.

Student government at the University of California.

SCHOOL ARCHITECTURE.

997. **Ashbaugh, Ernest J.** Survey of the school buildings of Muscatine. Iowa City, Iowa, The University, 1918. 40 p. 8°. (University of Iowa bulletin, first series, no. 22, September 1, 1918. Extension division bulletin no. 41)

998. **Calloway, Clinton J.** Cooperative school building. Southern workman, 48 : 236–41, May 1919.

Rural schoolhouses for colored people in Alabama, Georgia and other Southern States, built on the cooperative plan.

SCHOOL HYGIENE AND SANITATION.

999. **Deardorff, Neva R.** For the children of two continents. An account of the International conference on child welfare standards. Survey, 42 : 269–72, 294, May 17, 1919.

Gives tentative standards for public protection of health of school child adopted by the conference.

1000. **Holt, L. Emmett.** Democracy for children. Good housekeeping, 68 : 21–22, 146–49, May 1919.

Says our democracy means a fair start in the race of life for every American child with good health as a foundation. One out of every three school children is suffering from some remediable defect, and four million of them demand immediate attention. There must exist no avoidable malnutrition among the children of this great country.

1001. **Thomason, John F.** The teaching of hygiene in the public schools. Rock Hill, S. C., Winthrop normal and industrial college, 1918. 56 p. 8°. (Bulletin of the Winthrop normal and industrial college, vol. 12, no. 2, December 1918)

The presen sttatus of hygienic instruction. aims, suggestions for the improvement of instrucion in hygiene. etc.

PHYSICAL TRAINING.

1002. **Society of directors of physical education in colleges.** Papers from the 22d annual meeting, New York City, December 28, 1918. American physical education review, 24: 187–212, April 1919.

Contains: 1. C. W. Savage: Lessons from the war for physical education in colleges, p. 188–90. 2. J. L. Griffith: The value of athletics as part of military training, p. 191–95. 3. T. A. Storey: Universal physical education—a state and a national obligation, p. 196–98. 4. James Naismith: Universal military training, p. 200–204. 5. S. A. McComber: American sports in France, p. 206–12.

1003. **Hall, George A.** Maintaining physical standards for children entering industry. Ungraded, 4: 131–35, 161–66, March, April 1919.

Paper read before the fourteenth annual conference of the National child labor committee, New York city, December 7, 1918.

1004. **Hilderbrant, Edith L.** The historical aspect of physical education. Mind and body, 26: 49–55, April 1919.

1005. **Kleeberger, F. L.** Inter-collegiate athletics in relation to physical training. School and society, 9: 570–74, May 10, 1919.

I. Inter-collegiate or inter-school athletics.—II. Developmental athletics.—III. Recreative athletics.—IV. Intramural, intra-collegiate or secondary athletics.

SOCIAL ASPECTS OF EDUCATION.

1006. **Playground and recreation association of America.** Year book [1918] New York city, Playground and recreation association of America, [1919] 45 p. 8°. (No. 172)

Contains officers of recreation commissions and associations and statistics of recreation centers for 1918.

1007. **Mecklin, John M.** Some limitations of the social emphasis in education. School and society, 9: 584–91, May 17, 1919.

1008. **Studebaker, J. W.** The peace program of the junior Red cross. Current education, 23: 147–51, May 1919.

1009. **U. S. Bureau of labor statistics.** Welfare work for employees in industrial establishments in the United States. Washington, Government printing office, 1919. 139 p. plates. 8°. (Bulletin of the United States Bureau of labor statistics, no. 250. Miscellaneous series)

Chapter VII.—Education: p. 94–99.

CHILD WELFARE.

1010. **Bascom, Elva L.** *and* **Mendenhall, Dorothy Reed,** *comp.* Child welfare. Selected list of books and pamphlets. Chicago, American medical association [1919?] 40 p. 8°.

A revision of a bibliography first published by the Wisconsin library commission in 1916.

1011. **U. S. Children's bureau.** The state and child labor. Lists of states with certain restrictions as to ages and hours. Washington, Government printing office, 1919. 46 p. 8°. (Children's year leaflet no. 13, Bureau publication no. 58)

Lists on pages 26–38 the state laws on compulsory school attendance.

RELIGIOUS EDUCATION.

1012. **Carnoy, Albert J.** The record of a Catholic university. Catholic world, 109: 176–85, May 1919.

Describes work of Louvain university, Belgium; cites history of the institution; and urges closer bonds of friendship between Louvain and Catholic colleges in this country.

1013. Christian education, vol. 2, no. 11, March 1919.

The 1919 year book of the Council of church boards of education in the United States of America, 48 p.

Contains the reports of the secretaries of the various church boards of education.

1035. **Aikens, Charlotte A.** Training school methods for institutional nurses. Philadelphia and London, W. B. Saunders company, 1919. 337 p. 8°.

1036. **Gray, Alexander.** Electrical engineering as taught in American colleges. Engineering education, 9: 288–304, April 1919.

Reprinted from The Electrician, London, vol. 81, no. 30.

Entrance requirements, methods of instruction, etc.

1037. **Whitney, W. R.** American engineering research. 1918. p. 115–27.

Reprint from the February, 1919, Proceedings of the American institute of electrical engineers of an address delivered at its 343d meeting, Philadelphia, Pa., December 13, 1918.

Plans and suggestions for developing engineering research in the United States.

CIVIC EDUCATION.

1038. **Aurner, Clarence Ray.** Historical survey of civic instruction and training for citizenship in Iowa. Iowa journal of history and politics, 17: 135–222, April 1919.

1039. **Broadhurst, Jean** *and* **Rhodes, Clara Lawton,** *comp.* Verse for patriots, to encourage good citizenship. Philadelphia and London, J. B. Lippincott company [1919] xi, 367 p. plates. 12°.

A fine volume of poetry offering an ideal aid to the teaching of patriotism in the schools.

1040. **Cooper, Frank B.** Sanity in Seattle. American teacher, 8: 77–80, April 1919.

Replies to a questionnaire sent to high school teachers of Seattle to ascertain the practices relative to instruction in history, civics, and economics, and the extent and manner of allowing discussion of current events in the high schools.

1041. **Hyde, Dorsey W.,** *jr.* New York's new emphasis on civic training. American city, 20: 444–46, May 1919.

1042. **Leighton, Etta V.** Our little citizens. Primary education, 27 : 281–82, May 1919.

Suggestions for teaching citizenship—fighting bolshevism, school gardens and spring clean-up work, talks against truancy, etc.

1043. **Leo,** *Brother.* Teaching patriotism through literature. Catholic school journal, 19: 59–60, May 1919.

Some comments suggested by Bulletin 1918, no. 32 of the Bureau of education on "Teaching American ideals through literature."

1044. **Reed, Nellie.** Teaching civics without a textbook. Bulletin of high points in the work of the high schools of New York city, 1: 24–26, April 1919.

Read at a meeting of civics teachers, held March 6, 1919, in the board rooms of the Department of education of New York city.

Community civics.

1045. **U. S. Treasury department. War Loan organization. Savings division.** Ten lessons in thrift. 2d ed. Washington, 1919. 19 p. 8°.

Reading list of books on thrift and savings: p. 17–19.

Prepared with the cooperation of the social and industrial conditions department of the General federation of women's clubs.

AMERICANIZATION OF IMMIGRANTS.

1046. **Lane, Franklin K.** Secretary Lane's speech before governors' conference. Explanation of Smith-Bankhead bill to chief executives of many states. Americanization, 1: 7, May 1, 1919.

Americanization and the teaching of English to foreigners—the Smith-Bankhead bill for the abolition of illiteracy.

1047. **Massachusetts. Department of university extension.** The problem of immigrant education in Massachusetts. Boston, Mass., 1919. 14p. 8°. (Massachusetts. Board of education. Bulletin, vol. 4, no. 4, July 1919.)

1048. **Steiner, Edward A.** Americanizing New York. American review of reviews, 59 : 517–20, May 1919.

Progress accomplished by the various agencies for Americanization of foreign residents in New York city.

MILITARY TRAINING.

1049. **Dooley, C. R.** Army vocational training. Engineering education, 9: 263–77, March 1919. illus.

The experiment in vocational training conducted by the Committee on education and special training of the War department.

1050. **Gosling, Thomas Warrington.** Military training in high schools. Journal of education, 89: 524–25, May 8, 1919.

Arguments against compulsory military training for high school boys.

1051. Report of the New York state reconstruction commission on military training. Scouting, 7: 5–7, May 1, 1919.

Results of an inquiry into the operation of the New York state military training law.

1052. **U. S. War department. Committee on education and special training.** Final report of the National army training detachments later known as Vocational section S. A. T. C. Washington, War department, Committee on education and special training, 1919. 179 p. illus. 4°.

CONTENTS.—Introduction.—Part I. General operating plan.—Part II. The schools in action.—Part III. Administration.—Part IV. Special supervision.—Part V. General summary.

1053. **Walters, Raymond.** A study of rating grades of graduates of the Field artillery central officers' training school. School and society, 9: 512–16, April 26, 1919.

Facts in regard to the students of the Officers' training school at Camp Zachary Taylor, Louisville, Ky.

EDUCATION OF WOMEN.

1054. **Lawrence, Lucy.** The girl and her vocation. Teacher's journal, 18: 436–40, May 1919.

The preparation of a girl for her two vocations—her real vocation, which is homemaking, and a gainful occupation for the period before she enters upon her real vocation.

1055. **Women's intercollegiate association for student government.** Conference . . . business meeting, Wilson college, Chambersburg, Pa., December 16, 1918. 24 p. 12°.

CONTENTS.—I. Relation of faculty and students.—II. Attitude of students toward self-government.—III. Effect of public opinion upon general regulations, social life and development of the honor system.—IV. Finances.—V. Publicity.—VI. Vocational bureaus.—VII. War relief work.

NEGRO EDUCATION.

1056. **Brady, St. Elmo.** After-war program of Negro education. Tuskegee student, 30: 6–7, April 12, 1919.

1057. **Hughson, Julian S.** The Negro and educational reconstruction in the South. American teacher, 8: 82–85, April 1919.

Some innovations suggested for improving the schools for Negroes in the South.

1058. **Noble, Stuart Grayson.** Educational values in schools for Negroes. South Atlantic quarterly, 18: 116–24, April 1919.

Claims that the education furnished for the Negro in the past has not functioned to any considerable extent in social efficiency. A curriculum based on economic efficiency, morality, sociability, and health should be productive of good results.

EDUCATION OF BLIND AND DEAF.

1059. **Andrews, Harriet U.** The diary of a deaf child's mother. Volta review, 21: 184–87, March 1919.

Concluded from February number.

1060. **Best, Harry.** The blind; their condition and the work being done for them in the United States. New York, The Macmillan company, 1919. xxviii 763 p. 8°.

CONTENTS.—Introduction.—Part I, General condition of the blind.—Part II, Blindness and the possibilities of its prevention.—Part III, Provision for the education of blind children.—Part IV, Intellectual provision for the adult blind.—Part V, Material provision for the blind.—Part VI, Organizations interested in the blind.—Part VII, Conclusions with respect to the work for the blind.—Appendixes.

An examination of the blind and of their estate from the point of view of the social economist.

1061. **Monroe, Sarah J.** Phonetics and word study. Volta review, 21: 213–16, March 1919.

A plan for pronunciation and speech drill. To be continued.

1062. **Newlee, Clara E.** A report of learning tests with deaf children. Volta review, 21: 216–23, April 1919.

Says that since language is the stumbling block of every deaf child, it has been impossible to try out the usual mental tests with deaf children. Use of the symbol-digit and digit-symbol tests which do not involve language at all. Illustrated with graphs.

EXCEPTIONAL CHILDREN.

1063. **National conference on the education of truant, backward, dependent and delinquent children.** Proceedings of the fifteenth annual conference . . . held in Kansas City, Mo., May 13–15, 1918. 108 p. 8°. (C. H. Johnson, secretary, Albany, N. Y.)

Contains: 1. W. L. Kuser: Plans and specifications, p. 9–15. 2. W. L. Bodine: Compulsory education and juvenile conditions of to-day, p. 26–28. 3. F. J. Sessions: The industrial exploitation of children, p. 29–34; Discussion, p. 34–39. 4. J. B. Montgomery: The cooperation of communities with the state in child welfare, p. 42–47. 5. M. P. Adams: Mooseheart, p. 49–52. 6. C. H. Johnson: What the institutions have learned from the war, p. 54–56. 7. Maude E. Miner: Prevention of delinquency in war time, p. 56–63. 8. H. H. Hart: Report of committee on juvenile courts in rural communities, p. 64–75. 9. Kenosha Sessions: The delinquent girl as a community problem, p. 76–78. 10. Mary J. Berry: The state's duty to the delinquent girl, p. 80–88. 11. H. W. Charles: The teaching of morals, p. 89–93.

1064. **Addition, Henrietta S.** *and* **Deardorff, Neva R.** That child. Survey, 42: 185–88, May 3, 1919.

Discusses the incorrigible child in his relations to school and the juvenile court, etc.

1065. **Dallenbach, Karl M.** The effect of practice upon visual apprehension in the feeble-minded. Journal of educational psychology, 10: 61–82, February 1919.

"Feeble-minded children improve slowly and gradually with practice, and the improvement is relatively permanent. There is a direct correlation between the range of visual apprehension and mental age. Individual differences are marked, but are closely correlated with mental age."

1066. **Gatewood, Esther L.** *and* **Evans, J. E.** A survey of an opportunity school. Journal of delinquency, 4: 86–102, March 1919.

Children attending are drawn from three main classes: (1) Incorrigibles, (2) subnormals, and (3) truants. It is a school where the children are given a chance "to make good or perhaps to catch up with the regular class from which they have been dropped."

1067. **Gesell, Arnold.** Special provisions for exceptional school children; a guide-book on the public school care of mentally deficient and otherwise exceptional pupils, with special reference to conditions and possibilities in Connecticut. [Hartford?] 1919. 76 p. illus. 8° (Connecticut school document)

1068. **Miner, James Burt.** Deficiency and delinquency; an interpretation of mental testing. Baltimore, Warwick & York, 1918. xiv, 355 p. 12°. (Educational psychology monographs, no. 21)

Author undertakes especially to put the determination of feeble-mindedness by objective examination with the Binet or other scales on what seems to him a sounder basis.

EDUCATION EXTENSION.

1069. **Horwill, Herbert W.** The education of the adult worker. Nation, 108: 738–39, May 10, 1919.

Describes the movements carried on in England by the Workers' educational association and the Plebs league.

1070. **U. S. Federal board for vocational education.** Evening and part-time schools in the textile industry of the Southern States. Washington, Government printing office, 1919. 106 p. 8°. (Bulletin no. 30. Trade and industrial series no. 5, April 1919)

Pt. I. Application of the Federal vocational education law to the textile industry.—Pt. II. Possible types of instruction under the Federal vocational education law.—Pt. III. Outlines of short-unit courses in evening and part-time classes for textile workers.—Pt. IV. Analysis of textile occupations as basis of recommending courses of instruction for evening and part-time classes.—Pt. V. General continuation part-time schools and classes.

1071. **Workers' educational association.** The W. E. A. education yearbook, 1918. London, The Workers' educational association; Boston and New York, Ginn and company [1918] 507 p. 12°.

The unique value of this yearbook to American students of educational and social problems is in the light it casts upon the educational status in Great Britain and upon the efforts now making there to give more and better opportunities to all classes. The numerous contributors are standard authorities on the subjects which they discuss, among them being Bernard Shaw, A. Clutton-Brock, H. G. Wells, M. W. Keatinge, Edmond Holmes, J. L. Paton, and Viscount Haldane. The book comprises seven parts, as follows: Introduction, The educational system of Great Britain and Ireland, Education in other countries (including America, by V. Seldes), The universities and the workers, The Workers' educational association, Educational movements, The organization of the teaching profession.

LIBRARIES AND READING.

1072. **Barnes, Walter,** *ed.* Types of children's literature; a collection of the world's best literature for children, for use in colleges, normal schools, and library schools. Yonkers-on-Hudson, N. Y., World book company, 1919. xiii, 464 p. 8°.

1073. **Severance, Henry Ormal.** A standard library organization suggested for Missouri high schools. Columbia, Mo., 1919. 19 p. 8°. (The University of Missouri bulletin. Vol. 20, no. 11. Education ser. 13)

1074. **Sullivan, James.** The importance of the high-school library. Journal of the New York State teachers' association, 6: 131–37, May 1919.

BUREAU OF EDUCATION: RECENT PUBLICATIONS.

1075. The college catalogue; by C. D. Jarvis. Washington, 1919. 23 p. (Higher education circular no. 13, January 1919)

1076. Education in Germany; by I. L. Kandel. Washington, 1919. 21 p. (Bulletin, 1919, no. 21)

Advance sheets from the Biennial survey of education, 1916–1918.

1077. Educational surveys; by Edward Franklin Buchner. Washington, 1919. 56 p. (Bulletin, 1918, no. 45)

Advance sheets from the Biennial survey of education in the United States, 1916–1918.

1078. Educational work of the Boy scouts; by Lorne W. Barclay. Washington, 1919. 16 p. (Bulletin, 1919, no. 24)

Advance sheets from the Biennial survey of education in the United States, 1916–1918.

1079. Girl scouts as an educational force; by Juliette Low. Washington, 1919. 8 p. (Bulletin, 1919, no. 33)
Advance sheets from the Biennial survey of education in the United States, 1916-1918.

1080. The kindergarten curriculum; by the Subcommittee on curriculum of the Bureau of education committee of the International kindergarten union. Washington, 1919. 74 p. (Bulletin, 1919, no. 16)

1081. List of references on the economic value of education. Washington, 1919. 7 p. (Library leaflet no. 4, April 1919)

1082. Monthly record of current educational publications: Index, February, 1918–January, 1919. Washington, 1919. 31 p. (Bulletin, 1919, no. 32)

1083. Recent progress in Negro education; by Thomas Jesse Jones. Washington, 1919. 16 p. (Bulletin, 1919, no. 27)
Advance sheets from the Biennial survey of education in the United States, 1916-1918.

1084. Review of educational legislation, 1917 and 1918; by William R. Hood. Washington, 1919. 38 p. (Bulletin, 1919, no. 13)
Advance sheets from the Biennial survey of education in the United States, 1916-1918.

PERIODICALS REPRESENTED IN THIS RECORD, FEBRUARY TO JUNE, 1919.

Alumni register (University of Pennsylvania), Burlington, N. J.
America, 59 East Eighty-third Street, New York, N. Y.
American annals of the deaf, 2419–2421 Greenmount Avenue, Baltimore, Md.
American boy, Detroit, Mich.
American city, 93 Nassau Street, New York, N. Y.
American college bulletin, *now* Christian education.
American education, 50 State Street, Albany, N. Y.
American journal of care for cripples, 2920 Broadway, New York, N. Y.
American journal of nursing, 2419–2421 Greenmount Avenue, Baltimore, Md.
American journal of psychology, Clark university, Worcester, Mass.
American journal of public health, 289 Fourth Avenue, New York, N. Y.
American journal of school hygiene, Worcester, Mass.
American journal of sociology, University of Chicago press, Chicago, Ill.
American journal of theology, University of Chicago press, Chicago, Ill.
American labor legislation review, 131 East Twenty-third Street, New York, N. Y.
American law school review, West publishing company, St. Paul, Minn.
American magazine of art, 1741 New York Avenue, Washington, D. C.
American medical association bulletin, 535 North Dearborn Street, Chicago, Ill.
American Oxonian, Menasha, Wis.
American physical education review, 93 Westford Avenue, Springfield, Mass.
American review of reviews, 30 Irving Place, New York, N. Y.
American school, P. O. Box 134, Milwaukee, Wis.
American school board journal, 354 Milwaukee Street, Milwaukee, Wis.
American schoolmaster, State normal school, Ypsilanti, Mich.
American teacher, 225 Fifth Avenue, New York, N. Y.
Americanization, Bureau of Education, Washington, D. C.
Annals of the American academy of political and social science, Woodland Avenue and Thirty-sixth Street, Philadelphia, Pa.
Arkansas teacher, Conway, Ark.
Asia, 627 Lexington Avenue, New York, N. Y.
Association of American colleges bulletin, 19 South La Salle Street, Chicago, Ill.
Atlantic monthly, 41 Mount Vernon Street, Boston, Mass.
Banker-farmer, Champaign, Ill.
Bookman, 244 Madison Avenue, New York, N. Y.

Boston medical and surgical journal, 101 Tremont Street, Boston, Mass.
Bulletin Missouri state teachers' association, Columbia, Mo.
Bulletin of high points in the work of the high schools of New York City, 500 Park Avenue, New York, N. Y.
Bulletin of the Pan-American union, Washington, D. C.
Business educator, Columbus, Ohio.
Canadian magazine, Toronto, Canada.
Catholic educational review, Washington, D. C.
Catholic historical review, Washington, D. C.
Catholic school journal, 445 Milwaukee Street, Milwaukee, Wis.
Catholic world, 120–122 West Sixtieth Street, New York, N. Y.
Chicago schools journal, Board of Education, Chicago, Ill.
Child, London, England.
Child labor bulletin, 105 East Twenty-second Street, New York, N. Y.
Chinese record, Shanghai, China.
Christian education, 19 South La Salle Street, Chicago, Ill.
Church quarterly review, London, England.
Classical journal, University of Chicago press, Chicago, Ill.
Classical weekly, Barnard college, New York, N. Y.
Colorado school journal, Denver, Colo.
Coltura popolare, Milan, Italy.
Columbia university quarterly, Columbia university, New York, N. Y.
Common ground, 238 Elm Street, West Somerville, Mass.
Contemporary review, 249 West Thirteenth Street, New York, N. Y.
Continent, 509 South Wabash Avenue, Chicago, Ill.
Current education, St. Martins, Philadelphia, Pa.
Dial, 152 West Thirteenth Street, New York, N. Y.
Education, 120 Boylston Street, Boston, Mass.
Education bulletin, Trenton, N. J.
Educational administration and supervision, Warwick and York, inc., Baltimore, Md.
Educational exchange, Birmingham, Ala.
Educational film magazine, 33 West Forty-second Street, New York, N. Y.
Educational foundations, 31–33 East Twenty-seventh Street, New York, N. Y.
Educational news bulletin, Madison, Wis.
Educational press bulletin, Springfield, Ill.
Educational record, London, England.
Educational review, Columbia university, New York, N. Y.
Educational standards, Charlestown, Mass.
Educator-journal, 403 Newton Claypool building, Indianapolis, Ind.
Elementary school journal, University of Chicago press, Chicago, Ill.
Engineering education, Bulletin of the Society for the promotion of engineering education, Lancaster, Pa.
English journal, University of Chicago press, Chicago, Ill.
English leaflet, Newtonville, Mass.
Evening post magazine, 20 Vesey Street, New York, N. Y.
Fortnightly review, 249 West Thirteenth Street, New York, N. Y.
Forum, 32 West Fifty-eighth Street, New York, N. Y.
General science quarterly, Salem, Mass.
Geographical review, Broadway at One Hundred Fifty-sixth Street, New York, N. Y.
Geographical teacher, London, England.
Good housekeeping magazine, 119 West Fortieth Street, New York, N. Y.
Graduate magazine (University of Kansas), Lawrence, Kans.
Harper's magazine, Franklin Square, New York, N. Y.
Harvard alumni bulletin, Boston, Mass.

Harvard graduates' magazine, Exchange building, Boston, Mass.
Hibbert journal, London, England, and 6 Beacon Street, Boston, Mass.
High school journal, Chapel Hill, N. C.
High school quarterly, Athens, Ga.
Historical outlook, *formerly* History teacher's magazine, McKinley publishing company, Philadelphia, Pa.
Illinois association of teachers of English bulletin, Urbana, Ill.
Illinois teacher, Bloomington, Ill.
Independent, 119 West Fortieth Street, New York, N. Y.
Indiana university alumni quarterly, Indianapolis, Ind.
Industrial-arts magazine, 129 Michigan Street, Milwaukee, Wis.
Iowa journal of history and politics, Iowa City, Iowa.
Johns Hopkins alumni magazine, Baltimore, Md.
Journal of applied psychology, Clark university, Worcester, Mass.
Journal of delinquency, Whittier state school, Whittier, Calif.
Journal of education, 6 Beacon Street, Boston, Mass.
Journal of education and School world, London, England.
Journal of educational psychology, Warwick and York, inc., Baltimore, Md.
Journal of experimental pedagogy and training college record, London, England.
Journal of geography, Broadway at One Hundred Fifty-sixth Street, New York, N. Y.
Journal of heredity, P. O. Box 472, Eleventh Street Station, Washington, D. C.
Journal of home economics, Station N, Baltimore, Md.
Journal of political economy, University of Chicago press, Chicago, Ill.
Journal of race development, Clark university, Worcester, Mass.
Journal of the American medical association, 535 Dearborn Street, Chicago, Ill.
Journal of the Association of collegiate alumnae, University of Chicago press, Chicago, Ill.
Journal of the National education association, 1400 Massachusetts Avenue, Washington, D. C.
Journal of the New York state teachers' association, 5 South Water Street, Rochester, N. Y.
Kansas teacher, Topeka, Kans.
Kentucky high school quarterly, Lexington, Ky.
Kindergarten and first grade, Springfield, Mass.
Library journal, 241 West Thirty-seventh Street, New York, N. Y.
Literary digest, 354–60 Fourth Avenue, New York, N. Y.
Living age, 41 Mt. Vernon Street, Boston, Mass.
Manual training magazine, Manual arts press, Peoria, Ill.
Mathematics teacher, 41 North Queen Street, Lancaster, Pa.
Mental hygiene, Concord, N. H.
Mercure de France, Paris, France.
Michigan alumnus, University of Michigan, Ann Arbor, Mich.
Midland schools, Des Moines, Iowa.
Mind and body, New Ulm, Minn.
Minnesota alumni weekly, Minneapolis, Minn.
Mississippi educational advance, Jackson, Miss.
Missouri school journal, Jefferson City, Mo.
Modern language journal, Sixty-eighth Street and Park Avenue, New York, N. Y.
Modern language teaching, London, England.
Monatschrift für höhere schulen, Berlin, Germany.
Monatshefte für deutsche sprache und pädagogik, Milwaukee, Wis.
Musical America, 501 Fifth Avenue, New York, N. Y.
Nation, 20 Vesey Street, New York, N. Y.
National association of corporation schools bulletin, Irving Place and Fifteenth Street, New York, N. Y.

National efficiency quarterly, 119 West Fortieth Street, New York, N. Y.
National municipal review, North American building, Philadelphia, Pa.
National note-book, 1025 Twelfth Street, Augusta, Ga.
National school service, Department of the Interior, Washington, D. C.
Nature-study review, Ithaca, N. Y.
Nebraska teacher, Lincoln, Nebr.
New republic, 421 West Twenty-first Street, New York, N. Y.
Nineteenth century and after, 249 West Thirteenth Street, New York, N. Y.
Normal instructor and primary plans, Dansville, N. Y.
North American review, 171 Madison Avenue, New York, N. Y.
North Carolina education, Raleigh, N. C.
Northwest journal of education, Seattle, Wash.
Nuova antologia, Rome, Italy.
Oberlin alumni magazine, Oberlin, Ohio.
Ohio educational monthly, Columbus, Ohio.
Ohio history teachers' journal, Columbus, Ohio.
Ohio teacher, Columbus, Ohio.
Oklahoma school herald, Oklahoma City, Okla.
Oregon teachers' monthly, Salem, Oreg.
Outlook, 287 Fourth Avenue, New York, N. Y.
Pedagogical seminary, Clark university, Worcester, Mass.
Pennsylvania gazette, University of Pennsylvania, Philadelphia, Pa.
Pennsylvania school journal, Lancaster, Pa.
Personnel, Box 543, Orange, N. J.
Phillips bulletin, Andover, Mass.
Physical training, 347 Madison Avenue, New York, N. Y.
Pictorial review, 222–226 West Thirty-ninth Street, New York, N. Y.
Popular educator, 50 Bromfield Street, Boston, Mass.
Porto Rico school review, San Juan, Porto Rico.
Primary education, 50 Bromfield Street, Boston, Mass.
Princeton alumni weekly, Princeton, N. J.
Psychoanalytic review, 41 North Queen Street, Lancaster, Pa.
Psychological bulletin, Princeton, N. J.
Psychological review, Princeton, N. J.
Public libraries, Library bureau, Chicago, Ill.
Quarterly journal of speech education, Menasha, Wis.
Quarterly journal of the University of North Dakota, University, N. Dak.
Religious education, 1440 East Fifty-seventh Street, Chicago, Ill.
Revista de la facultad de letras y ciençias, Universidad de la Habana, Habana, Cuba.
Revue de l'enseignement des langues vivantes, Paris, France.
Revue de Paris, Paris, France.
Revue internationale de l'enseignement, Paris, France.
Revue pédagogique, Paris, France.
Revue politique et parlementaire, Paris, France.
Revue universitaire, Paris, France.
Rivista pedagogica, Rome, Italy.
Rural school messenger, Kirksville, Mo.
School, 154 Fifth Avenue, New York, N. Y.
School and home, Atlanta, Ga.
School and home education, Bloomington, Ill.
School and society, The Science press, Garrison, N. Y.
School-arts magazine, 120 Boylston Street, Boston, Mass.
School bulletin, Syracuse, N. Y.
School education, Minneapolis, Minn.

School guardian, London, England.
School hygiene, London, England.
School index, Cincinnati, Ohio.
School life, Bureau of Education, Washington, D. C.
School news and practical educator, Taylorville, Ill.
School review, University of Chicago press, Chicago, Ill.
School science and mathematics, Mount Morris, Ill.
Science, The Science press, Garrison, N. Y.
Scientific monthly, The Science press, Garrison, N. Y.
Scouting, 200 Fifth Avenue, New York, N. Y.
Scribner's magazine, 597 Fifth Avenue, New York, N. Y.
Sewanee review, Sewanee, Tenn.
Sierra educational news, San Francisco, Cal.
South Atlantic quarterly, Trinity college, Durham, N. C.
South Dakota educator, Mitchell, S. Dak.
Southern school journal, Lexington, Ky.
Southern school work, Alexandria, La.
Southern workman, Hampton, Va.
Standard, 2 West Sixty-fourth Street, New York, N. Y.
Sunday school journal, Methodist book concern, Cincinnati, Ohio.
Survey, 112 East Nineteenth Street, New York, N. Y.
Teachers college record, Teachers college, Columbia university, New York, N. Y.
Teacher's journal, Marion, Ind.
Teachers' world, London, England.
Teaching, Kansas state normal school, Emporia, Kans.
Tuskegee student, Tuskegee Institute, Ala.
Ungraded, 500 Park Avenue, New York, N. Y.
University of California chronicle, Berkeley, Cal.
University record, University of Chicago press, Chicago, Ill.
Unpopular review, 19 West Forty-fourth Street, New York, N. Y.
Virginia journal of education, Richmond, Va.
Vocational summary, Federal Board for Vocational Education, Washington, D. C.
Volta review, Volta bureau, Washington, D. C.
West Virginia school journal and educator, Charleston, W. Va.
Western journal of education, San Francisco, Cal.
Western teacher, Milwaukee, Wis.
Wisconsin journal of education, Madison, Wis.
World's work, Doubleday, Page and Company, Garden City, N. Y.
Yale alumni weekly, Yale Station, New Haven, Conn.
Yale review, Yale Station, New Haven, Conn.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 43

EDUCATION IN FRANCE IN 1916-1918

By I. L. KANDEL

[Advance Sheets from the Biennial Survey of Education, 1916–1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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EDUCATION IN FRANCE IN 1916–1918.

By I. L. KANDEL.

CONTENTS.—Administration—Physical welfare—Elementary education—Secondary education of girls—Secondary education of boys.

The war has affected the conduct of education in France perhaps more than in either England or Germany. For the first two years the demands at the front tended to subordinate all other thought and activities to the one great purpose. More recently the educational literature of France indicates that the war has had the effect of provoking considerable questioning and dissatisfaction with the existing systems of education. Radical changes have not yet taken place in educational administration or organization, but the ground is being prepared by discussions and conferences, by public and private commissions of inquiry, by articles in the daily press for the reforms that it is now generally felt must come after the war. The schools will be called upon to play an important part in the restoration of the country and must, in the opinion of many, be improved to meet the new demands.

While the war has strengthened the universal conviction that the principles of French democracy and the basic French institutions are sound, it has none the less directed increased attention to the need of widening educational opportunities and the general scope of the school. The proposals for the better administration of school attendance, and for compulsory attendance at continuation schools, the reform of the examination for the certificat d'études primaires, the consideration of the reform of the higher elementary school, and the urgent demand for greater opportunities for higher education as well as its reform are all comprised in the present tendency. Within the school there is a demand that instruction be less academic and bookish and more adapted to local circumstances and modern needs in general.

As in other countries there are those who would convert every school into a technical or vocational school. This problem is well summarized in the following statement:

> The present problem is that of reconciling two cultures—the humanistic and practical. What shall be the relations in the elementary schools between in-

> struction and local conditions? What in the higher elementary schools or in the technical schools shall be the relations between general education and vocational training? In secondary education what shall be the relations between classical culture and preparation for modern life, and in higher education between pure and applied science? Is not the problem the same everywhere? [1]

The answer to this statement is that the principle of balance, the principle upon which the Republic is founded, will offer a solution here too.

> A balance between science and letters, between authority and liberty, between discipline and initiative; a balance attained with wisdom and moderation, with tolerance and humanity, with finesse and good sense; a balance so conforming to the liberal ideas maintained by the defenders of civilization that it will suffice for us to establish it in instruction so that it may become adapted to the demands of modern society and definitely serve the interests of the country.[2]

While one tendency is represented by those who desire to retain the present organization provided it is reformed to a considerable degree, there is a still more marked tendency, as is indicated below, to demand a thorough reorganization of the educational system. According to this view, represented by a number of teachers grouped together as Les Compagnons and attracting considerable attention in the country, the problem is no longer merely one of pedagogy or of internal reform. "This is a moment when the whole country feels too strongly the need of a general reconstruction, of reform in administration, politics, economics, industry, etc., for one to confine oneself strictly to the field of pedagogy." [3]

The authors accordingly advocate not a reform of the disparate parts of the system, but a reorganization of the whole system based on one point of view. They advocate a common school (école unique), upon which can be built up on one side the humanistic, on the other vocational courses. This should be the national type, whether in public or private schools. The elementary school should be the portal for all, but opportunity should be offered to all to advance as far as their ability warrants.

ADMINISTRATION.[4]

There appears to be a marked feeling that the need for the reform of administration, organization, curricula, and methods of instruction is one of the most pressing problems of the present time. The charge is made that the administrative machinery of French education no longer meets the requirements and demands of modern education.[1] The present situation has developed partly out of the existence, side by side and without coordination, of different branches of education, some under the control of the ministry of public instruction and fine arts, others distributed among other ministries, partly out of the practice of piecemeal reforms and reorganizations. Reform at this hour, it is urged, must be based on a consideration of the needs of the country as a whole and of the functions of education in general. Peace will bring a well-defined task, for which half measures will be inadequate.[2] The whole national structure of education must be reorganized from the elementary school up.[3] The demand for reorganization and reconstruction in industry, commerce, agriculture, politics, and social life can not be met without the one reform on which these all depend—the reform of national education. Only through such a reform—the conservation and training of its human capital—can France reap the benefit of her great material and spiritual resources.

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[1] Crouzet, P. Pour la revision d'ensemble de l'éducation nationale. *La Grande Revue*, vol. 94, p. 395.

[2] Bezard, J. Les lecons de la guerre dans l'enseignement secondaire. *La Grande Revue*, vol. 94, p. 472.

[3] Les Compagnons. Le lycée et l'école primaire. *Revue Universitaire*, vol. 272, Oct. 1918, pp. 172ff. See also *Les Cahiers de Probus. Premier Cahier*, by the same authors (Paris, 1918).

[4] For a detailed consideration of this subject see *Les Cahiers de Probus. Premier Cahier.* Par "Les Compagnons." (Paris, 1918.)

The chief administrative change that is considered desirable is one that will abolish the extreme form of centralization that characterizes the system. If the needs of the nation and the different localities are to be met, some flexibility must be introduced in educational administration,[4] and provision must be made for the cooperation of various economic and industrial interests, as already proposed in 1911 by M. Steeg. The present system inevitably leads to administration through official documents and correspondence rather than by direct personal supervision. The future requires the grant of larger liberty to local authorities. At present the powers of the local authorities in education are almost negligible, and many of the local school committees (commissions scolaires) contemplated by the law have ceased to function.[5] Any increase in local freedom must be extended to the teachers, who should feel at liberty to adapt their work to local needs within certain well-defined minimum requirements and standards.

> One writer sums up these suggestions as follows: "There will not be the same uniformity among the schools of different departments or among diverse communes of the same department; but what does such uniformity, created artificially and externally by the State laws, matter, if there is an internal harmony, if each school obeys the rhythm of the life about it?"[5]

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[1] Crouzet, P. Pour la revision d'ensemble de l'éducation nationale. *La Grande Revue*, vol. 94, pp. 392ff.

[2] Crouzet. P., *loc. cit.*

[3] See *L'École et la Vie*, a magazine established to propagate the closer relationship between education and life. See also the work by "Les Compagnons" cited above.

[4] Collet, E. Tous les enfants en classes. *L'École et la Vie*, Oct. 13, 1917, p. 70.

[5] Bugnon, E. L'École primaire et les leçons de la guerre. *La Grande Revue*, vol. 94, p. 511. Also *Les Cahiers de Probus*.

Concrete proposals for the development of a system of administration to give effect to these tendencies have not yet been put forward to any extent. It is suggested that the conseil superieur de l'instruction publique can be brought more closely into touch with the currents of national thought by the inclusion of women and of representatives of employers and employees from the fields of industry, commerce, and agriculture.

PHYSICAL WELFARE.

It was perhaps to be expected that France would be influenced as a consequence of the close contact with the British and American forces, just as it may be expected the French intellectual influences will affect British and American thought in time. A widespread movement has begun for the improvement and extension of physical education and games throughout the country, not merely to develop agility and endurance in the individual, but to strengthen the Nation as a whole. The recently reformed examination for the certificate of primary studies includes a gymnastic exercise. Associated with this movement is the recognition that more attention must be given to medical inspection and treatment of children of school age and preschool age. The American Red Cross has aroused considerable interest, as, for example, in Lyon, by distribution of leaflets and exhibits on the physical care and welfare of children. Early in 1917 a commission was appointed to study the reorganization of physical training in the schools.

In April, 1918, the ministry of public instruction issued a circular[1] to the rectors of the academies urging the development of physical education, games and athletic sports in secondary, normal, and higher elementary schools. It is pointed out that such training could be organized without encroaching on class work. School principals and teachers are asked to encourage the establishment of clubs under their general supervision and with the assistance of advisory committees representing the public and alumni associations. From another point of view, school athletics are advocated as a center for cooperation between parents, teachers, physicians, and pupils.[2]

La Ligue française pour l'hygiène scolaire is actively promoting the introduction of open-air exercise, in which teachers should also participate, and is advocating the introduction of school medical inspection and the keeping of records of physical development. A Union des sociétés françaises de sports athlétiques has been established to promote the development of school athletic clubs and to secure playing fields. It is suggested in the circular that participation should not be made compulsory and that no boy be allowed to take part without the written consent of his parents, so that the State might be relieved of responsibility for accident. The union has made advantageous terms with insurance companies to furnish compensation in cases of accident.[1]

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[1] *Bulletin Administratif.* Apr. 15 and May 18, 1918: *Revue Universitaire,* vol. 27, 2. p. 141f.

[2] See Etevenon, L. Les sports, terrain d' entente entre les parents, les maîtres, les édecins, et les élèves. *L'École et la Vie,* Dec. 1, 1917, pp. 180f.

The further development of the movement is indicated in the following account of some propaganda that has already been undertaken:[2]

> In the course of a recent manifestation in favor of physical education, organized at Bordeaux, M. Henry Pate, deputy, delivered a very interesting address, in which he stated that he and some of his colleagues in the house of deputies had decided to participate actively in the physical education and athletics of the young, in accordance with the following program: (1) To adopt a general method of rational physical instruction, based on a knowledge of the physical needs of the subject, the specialization of the work, and the attraction of the exercise. (2) To create regional schools and a superior school destined to create and to maintain a unity of methods. (3) To open these schools to the physical instructors of the army, to the monitors of the preparation for military service, and to the instructors of both sexes. (4) To direct the young toward outdoor exercises, giving them freely. (6) To obtain (*a*) the simplification of school programs, which are frightfully overloaded and tend to destroy energy; (*b*) the introduction of a physical test in all examinations; (*c*) the institution of outdoor schools and open-air or outdoor colonies for the physically abnormal children; and (*d*) the complete reorganization of school medical inspection. (7) To assure the employment of special professors of gymnastics. (8) To demand legislation providing for obligatory post-graduate instruction and the introduction of the eight-hour day (la semaine anglaise), so as not to injure the vocational work of the adults, or their apprenticeship, or reduce the wages to which they may aspire. (9) To give a larger place in the training for military service to physical education and athletics, as a base for the future reorganization of the army, and of the recruiting laws.
>
> In order to solve these multiple problems, there has been appointed a comité national de propagande pour le développement de l'éducation physique et sportive, de hygiène sociale et de la rénovation de la race. This committee will cooperate closely with the public authorities, the universities, the faculties, the commercial centers, industrial centers, financial powers, and the press.

ELEMENTARY EDUCATION.

The most pressing problems in the field of elementary education are the improvement of school attendance, adaptation of the work of the school to local environment, and better articulation with higher schools. The withdrawal of adult workers affected French agriculture and industry seriously, and until better adjustments between the needs of the army and the needs of industries were made, the immediate result was a marked increase of child labor with a consequent effect on school attendance. This condition was already marked and subjected to criticism before the war;[1] the law of 1882 permits the exemption of children from school attendance for three months of the year if they are assisting parents in harvesting, potato gathering, fruit picking, and other agricultural pursuits, and for one school session out of two if they are working for another employer. A ministerial circular[2] issued on October 1, 1917, urges that better efforts be made to improve school attendance and indicates that restrictions would be introduced officially. The preparation of the next generation and the great task awaiting it require that children should enjoy a longer education. To this end it is pointed out that the teachers, who have gained considerable prestige during the war, can contribute much by cooperating with the home. The suggestion is also made that municipal authorities might make the grant of clothing, food, and other assistance to school children dependent on their regular attendance.

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[1] *Revue Universitaire*, vol. 25, 1, p. 330, Les exercises physiques; vol. 26, 1, p. 378, Voeux relatifs à l'éducation physique; vol. 26, 2, pp. 95ff., La question de la culture physique dans l'enseignement secondaire; vol. 27, 2, pp. 141f., Les sports athlétiques dans les établissements secondaires.

[2] Reprinted in School Life, vol. 1, No. 3, p. 13, from the Journal of the American Medical Association, July 20, 1918.

The curriculum of the elementary school suffers too much from uniformity and continues, as in many other educational systems, to be too bookish. Says P. Crouzet, Inspecteur de l'Académie de Paris:

> We are too confident that knowledge is power. We study to know instead of studying to live better. . . . The educational problem of to-morrow is not to extend or change the knowledge or to extend or modify the programs so much as to direct knowledge of life, to teach everything, not in terms of the past but of the present and future.[3]

Although the regulations permit adaptation to local industrial and agricultural needs, very little appears to have been done to make this permission effectual. It is urged that instruction in the elementary school should be made more real and practical, not merely by the effective introduction of manual work for boys and household arts for girls, and school gardens for both, but by vitalizing the curriculum by reference to the environment with which the pupils are familiar. Such a reform, it is admitted, will demand more teachers of good training who can make the best use of the responsibility that should be theirs. In country areas it is recommended that principals be appointed to supervise a number of teachers and schools. It is felt that the new education for responsibility and liberty, that are fundamental to modern democracy, can not be developed under the existing pressure of uniformity.[4]

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[1] Bugnon, E. L'école primaire et les leçons de la guerre. *La Grande Revue*, p. 506; Cottet, E. Tous les enfants. *L'École et la Vie*, Oct. 13, 1917, p. 70.

[2] *Bulletin Administratif*, Oct. 13, 1917.

[3] Crouzet, P. *L'École et la Vie*, vol. 1, Sept. 15, 1917, p. 3.

[4] Bugnon, E. L'École primaire et les leçons de la guerre. *La Grande Revue*, pp. 480– Une programme d'éducation nationale, proposed by La Ligue française. *Revue rsitaire*, vol. 26, 1, pp. 306f.

In 1917 the Conseil supérieur de l'instruction publique voted to reform the examination for the certificate of elementary studies (certificat d'études primaires). This vote was followed by a ministerial decree on July 19, 1917, giving the details of the reform and by another on March 9, 1918, giving instructions to the rectors of academies on the conduct of the examinations. The purpose of the reform is to meet some of the criticisms that the work of the elementary school is too bookish, emphasises memory work, and neglects subjects not required in the examinations. The reform aims to secure a place for every subject in the curriculum commensurate with its importance, to develop uniformity of standards, and to encourage the development of judgment, intelligence, and will. The examination is to be conducted by commissions appointed by the academy rectors and is to be based on the work of the cours moyen, usually completed at the age of 11 or 12. The examination is in two parts. The first includes an essay on a simple topic, dictation, and questions on the text, problems in practical arithmetic and the metric system; a composition or some questions in history and geography or everyday science, and for boys an exercise in linear drawing or handwork, and for girls a test in sewing or design. The second part consists of questions in history and geography or science, a test in reading and simple questions on the text, recitation of a piece of poetry or singing at the pupil's option, a test in mental arithmetic, and a simple gymnastic exercise.

A similar reform of the examinations at the close of the higher elementary schools is also contemplated, but for the present is postponed until these schools undergo a contemplated revision On August 3, 1918, a circular was issued by the minister of public instruction[1] directing the attention of teachers and inspectors to the need of promoting continued full-time education by improving instruction of pupils from the ages of 12 to 15. The circular proposes that conferences be conducted to consider the revision of the cours supérieur and the cours complémentaires. The following questions are proposed for discussion, with the suggestion that the replies be sent to the ministry in December, 1918:

The number of advanced courses in each canton and their adequacy? How to create new courses?

What should be their programs? What place should be given to vocational education?

Should there be a special examination leading to a sanction?

What can the elementary schools do to improve the work offered to older pupils of 13 and 14? Can not these schools combine general education and preapprenticeship instruction?

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[1] *Bulletin Administratif,* Aug. 3, 1918, p. 189f. (Circulaire relative aux conférences de 1918 et à l'organization d'un enseignement destinées aux enfants de 12 à 15 ans).

The importance of the problem, which is, of course, closely associated with the proposals for compulsory continuation school attendance, is emphasized:

> The more the ruin and losses increase, the greater must be the service of national education. The end to be attained is two-fold—to stimulate, by means of the cours supérieurs and complémentaires and other schools offering the opportunity, the development of the pupils; and by the cours de perfectionnement to furnish the whole people with the means of increasing their moral strength, intellectual vigor, and economic productivity.

To repair the ruins of France in men and material caused by the war, the urgent need will be to discover ability wherever it can be found. The burden will, therefore, be placed on those intrusted with the administration not only to select pupils in the elementary schools who show ability to proceed further, but to articulate the different types of schools in such a way that each boy or girl will secure the training most suitable. This task will not only involve selection of pupils for advancement, but the creation of new types of schools adequately differentiated to meet the different abilities of the pupils and the diverse needs of the country. At present the only opportunity of which the elementary school pupils are able to avail themselves is to pass on to the higher elementary school. The doors of the secondary schools were thrown open to them in 1902, but very few take advantage of this opportunity in spite of the existence of scholarships.[1] That an elementary education is not sufficient equipment for life has been recognized universally,[2] and with the end in view of increasing educational opportunities compulsory attendance at continuation schools has been proposed. For the more able, however, the development of trade and technical schools and a reorganization of secondary education along modern lines are advocated.

To enable the poor pupil of parts to continue his education as far as possible it is urged not only that scholarships should be offered, but that maintenance grants be given and allowances to parents to compensate them for loss of wages. The proposals for the reorganization of secondary education are made largely with importance of articulation in mind,[3] while the better adjustment of the elementary schools to vocational preparation is also receiving considerable attention. These points of view merely indicate that the elementary school can not be organized without reference to the broader needs of the nation.[4]

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[1] Crémieux, A. De l'école primaire au lycée. *Revue Universitaire,* 27, 1, April, 1918, pp. 280ff.

[2] Clavière, J. L'enseignement national après la guerre. *Revue Universitaire,* vol. 25, 2, p. 64.

[3] Bounhiol, J. P. Les leçons de la guerre pour l'enseignement secondaire. *La Grande Revue,* vol. 94, p. 485.

[4] Une programme d'éducation nationale. *Revue Universitaire,* vol. 26, 1, pp. 306f.

The project for a continuation school law to which reference was made in the last report of the Commissioner of Education has not yet been passed, but seems to be exercising some influence already. At Corbie the local manufacturers have posted notices to the effect that they would employ young persons leaving the elementary schools with the certificate of studies, and allow them to attend the local higher primary school for three years, providing tuition, books, apparatus, and even maintenance grants. On leaving these schools the pupils would enter the factories as apprentices for two or three years, during which they would continue to attend school three times a week for general and technical instruction during working hours and without loss of pay. The abler among them would be sent on to schools of arts and crafts, receiving maintenance allowances and tuition during their period of study. The parents would be under no obligation to the employers except to permit them to control the educational progress of the young employees, so that "they may become active, hardy, enterprising, and proud of their country."[1]

SECONDARY EDUCATION OF GIRLS.[2]

The changes brought about by the war in the position of women have made the reorganization of secondary education of girls a question of vital importance. As in other countries women have taken the place of men in every walk of life, and have proved themselves equal to most tasks, but the change in the social tradition has been more revolutionary in France than elsewhere. It is recognized that not only the professions but positions of leadership in commerce and industry must in the future be opened to women on an equal footing with men. Women have been admitted for some time to the practice of law and medicine, and new careers are constantly being made accessible to them. In the field of commerce where women are expected to find considerable scope in the future the Chamber of Commerce of Paris has opened the École commerciale des jeunes filles which will give a three-year course, including preparation not merely for subordinate clerical positions but for the more important work of management. The École pratique de haute enseignement commercial pour les jeunes filles at the Conservatoire des arts et métiers in Paris offers similar opportunities. Schools and institutions hitherto restricted to men have now opened their doors to women. These include the École centrale des arts et manufactures, the Institut agronomique, the École de l' horlogerie, and the École de physique.[1]

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[1] *Revue Pédagogique,* vol. 72, pp. 74f.

[2] See especially:

Bernes, H. La réforme de l'enseignement secondaire des jeunes filles. *L'Enseignement Secondaire,* July-October, 1916, pp. 61ff; La question de l'enseignement secondaire des jeunes filles. *Ibid.,* November-December, 1916, pp. 77ff.

La réforme de l'enseignement secondaire des jeunes filles. *Revue Internationale,* 203ff.

Projets relatifs à l'enseignement secondaire des jeunes filles. *Revue Internationale de l'Enseignement,* vol. 71, pp. 47ff.

These developments have led to a demand for reform of the system of secondary education, which as organized under the law of 1882 is adapted chiefly for girls of the wealthy middle classes who do not expect to enter a profession or career of any kind, but desire a general education, leading to a diplôme de fin d' études, which, however, has no official value.

Private schools, however, offered facilities for the preparation of girls for the baccalaureate, while in a few cases some schools for boys admitted girls for advanced work. The proposals take the form of a demand either for secondary education of the same type as that for boys or a new and extended organization of the existing system. The objection to the first suggestion is that the basis of the lyceés and the colleges for boys is not sufficiently broad and that the majority of girls at present do not desire a preparation that leads only to the universities and professions. It is also felt that while the secondary schools for boys are being subjected to criticism and discussion, it would not be advisable to copy them.[2] The difficulty in the way of the second proposal is the national tradition of privileges, certificates, and examinations which mark the end of a school course. A third suggestion, that a new section of the examination for the baccalaureate be created, is rejected as introducing too much differentiation and leading as a consequence to much confusion, while its establishment would probably have the effect of ousting or lowering the standard of the present diploma. The problem involves, therefore, not so much the reorganization of girls' schools as the nature of the educational and other privileges (*sanctions*) to which it will lead.

In December, 1916, a Project relatif à l'enseignement secondaire des jeunes filles was presented to the Conseil supérieur de l'instruction publique, in which it was pointed out that any radical change in the system of secondary education of girls would require parliamentary action. The plan presented in the projet was based on the existing organization in the expectation that the reform could be effected by administrative machinery. The problem was to bring the diplôme de fin d'études into harmony with modern needs and to give it a value equal to that of the baccalaureat. The projet recommends the beginning of secondary education at the age of 11 instead of 12, as under the present system, thus extending the existing course to six instead of five years. The course is still to be divided into two parts—one of four years closing with the certificat d'études secondaires, and the other two years culminating in an examination for the diplôme de fin d'études. Except for those students who desire to take the baccalauréat with Latin the work is to be the same for all and is to include morals and psychology, French langauge and literature, modern languages, history, geography, mathematics and science, drawing, and gymnastics. It is suggested that a seventh year be added for those who desire to study for the second part of the baccalauréat or to continue a special general and cultural course or to prepare for any of the new careers open for women in administration, commerce, finance, industry, and the civil services.

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[1] *Revue Universitaire,* vol. 26, 1, pp. 66f; vol. 26, 2, pp. 59ff; *L'Enseignement Secondaire,* 1917, p. 73.

[2] *Revue Internationale de l'Enseignement,* loc. cit., vol. 71, p. 51.

It was thought by the framers of the projet, who claimed to have canvassed teachers and associations of parents, that by this plan the diploma could be given the same sanction as the baccalauréat and that with some modifications those who desired could specialize for the Latin or science sections. The introduction of the projet was opposed, however, as illegal unless passed by parliament. It was urged that the conseil supérieur could not introduce it as an administrative measure. Accordingly, the minister of public instruction, M. Viviani, at the close of 1916, established a commission to inquire into the modifications needed in the organization of studies and privileges for the secondary education of girls.[1]

M. Camille See,[2] the author of the law of December 21, 1880, in his evidence before this commission on January 19, 1918, pointed out that the original intention of the law was a secondary school for girls giving a seven-year course, divided into two cycles of four and three years, respectively, and leading to the diploma of secondary studies. The fundamental course was to be so organized that by the addition of elective subjects pupils would have been able to enjoy the same curricula as those offered since 1902 in the boys' schools. He mentioned that he had also advocated in 1878 the establishment of technical courses leading to scientific institutions. The present proposals, in his opinion, only represented a return to the spirit of the law of 1880, which had been overridden by an administrative regulation of January 14, 1882.

The commission issued a questionnaire, covering the following topics, to educational authorities and parents' associations:

> Should the education of girls bear a distinctive character in organization and curriculum?
>
> What amount of time should be given, consistent with the requirements of health, to intellectual studies?

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[1] Commission extraparlementaire chargée d'examiner les modifications à apporter à l'organization des études et à la sanction de l'enseignement secondaire publique des jeunes filles.

[2] See *L'Enseignement Secondaire des Jeunes Filles,* May 15, 1918, pp. 193ff., and June 15, 1918, pp. 241ff.

What modifications are needed in the curriculum? Should room be found for domestic science, hygiene, and physical and practical technical training?

Should the diplôme de fin d'études be retained or changed, and what should be its relation to the baccalaureate?

When, if at all, should Latin be begun?

A subcommittee of the commission drew up a number of recommendations which are now being considered by all the members. The chief recommendations are as follows:[1]

1. The education of girls needs a new organization and appropriate program of studies.
2. The schools shall be organized in two cycles, the first of four years, the second of two. The course shall begin at the age of 12.
3. In the first cycle the school day shall be of four hours; in the second cycle of five hours.
4. Fourteen hours a week shall be given to compulsory subjects in the first cycle; 17 hours in the second.
5. An important and compulsory place shall be given to studies appropriate for girls (household arts and hygiene), practical work, and physical training.
6. The six years' course shall be brought to a conclusion in an examination on the work of the last year, leading to a diplôme de fin d'études, equivalent to the first part of the baccalaureate.
7. As many careers as possible shall be open to girls holding this diploma.

One of the burning questions in the secondary education of girls is whether Latin shall be included in the reorganization. The commission will probably favor its inclusion for those who desire it. It is also proposed that a seventh year be provided in the organization for girls who wish to complete the baccalaureate to enter the universities or to prepare for a professional career.

SECONDARY EDUCATION OF BOYS.

The war has directed considerable attention to the system of secondary education for boys, and more discussion has probably centered around this problem than around any other. The education of adolescents gives rise to a large number of questions. If the schools are to play an important part in the restoration of the country, and if a new generation is to be built up to repair the ruins of the past four years, it is urged that the whole structure of adolescent education must be revised with a view to differentiation. The suggestions for the improvement of elementary education have already been discussed; the proposals for the extension of a part-time compulsory attendance were referred to in the report of the Commissioner of Education for 1916; the vital questions of the moment concern not merely the administrative reorganization of the secondary schools but the fundamental reconsideration of the principles on which their curricula are based. These questions resolve themselves, when examined, into the problem of better articulation with other institutions, elementary and higher, the problem of creating increased opportunities for able pupils, and into the problem of revising the curricula and methods of the secondary schools to meet modern needs and demands.[1]

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[1] *Revue Universitaire,* loc. cit., vol. 25, 2, p. 215.

The problem of articulation has already been referred to and the suggestions for selecting the abler pupils from the elementary schools for advancement to higher education have been mentioned. It is pointed out by the critics of the existing system that the reorganization of 1902 was based in part on a desire to meet social needs, and to this end the beginning of secondary education proper was postponed to 11 in order to encourage more boys to enter from the elementary schools. The division into cycles was based on the desire of opening the way for the transfer of pupils from the higher primary schools. It is proved statistically by M. Brelet[2] that neither of these purposes has been attained. In spite of the offer of scholarships pupils of the elementary schools do not present themselves as candidates in any large number mainly because the curriculum of the higher primary schools is better adapted to their needs. Nor do the pupils from the higher primary schools flock to the secondary schools to avail themselves of the opportunity of completing the second cycle and the requirements for the baccalauréat. The few who are transferred find themselves handicapped, for three of the four available courses of the second cycle are closed to them because of their inadequate preparation in languages. From another point of view it is also proved statistically that the division into cycles is not warranted either by social or educational needs. The justifications for the division were, first, to encourage pupils to transfer from the higher primary schools, and, secondly, to enable pupils to leave at the close of the first cycle after completing a definite round of knowledge. Statistically it is shown that very few pupils leave at the end of the fourth year (in 1910 only 965 out of 9,236), fewer in fact than at the close of any other year of the whole course. On these grounds, therefore, new principles must be sought for the reorganization of the secondary school, taking into account not merely its educational purpose and function, but its relation to other institutions.[3]

The criticism of the present organization of the curriculum of the secondary schools is more widespread and more radical than is that of its administrative aspect. Education in France, it is argued, sets up false standards and is founded on false principles. France was before the Great War a huge diploma factory and the eduactional horizon for every student is bounded by the diploma or the sanction that it carries. The universal test of individual worth is the possession of a certificate. M. Lavisse, in a letter published on January 1, 1918, writes:

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[1] Besch, E. Le lycée et l'école primaire. *Revue Universitaire,* vol. 27, 1, pp. 324ff. Brelet, H. L'enseignement secondaire et la réforme de 1902. *Revue de l'Enseignement,* vol. 70, pp. 254ff; L'enseignement secondaire, ce qu'il doit être. *Ibid.,* vol. 71, pp. 361ff.

[2] Brelet, H. *Revue Internationale de l'Enseignement,* vol. 70, p. 266; *Revue Universitaire,* vol. 27, 1, p. 145f; pp. 224ff.

[3] See Brelet. *Loc. cit.*

> We suffered before this war from these bad habits in all branches of education. All of us were more or less the slaves of the examination. The examination was the director general of public instruction. But the examination is a detestable director.[1]

The result of this worship of paper qualifications is seen in the character of the syllabi and in the methods of instruction. The curriculum of the secondary schools is overcrowded; the energies and attention of the pupils are dispersed. The emphasis is placed on the acquisition rather than the assimilation of knowledge, on making the brain a storehouse rather than an instrument or tool.[2] That is the necessary result of the preparation for recurring examinations instead of directing effort to the development of activity, judgment, and personality. Erudition, borrowed from the Germans, and bookishness have taken the place of intelligent observation, intellectual curiosity, and contact with the needs of modern life. The product of the secondary schools of to-day, it is charged, is a sort of lay priest, living a life of his own, removed from social activity, and ignorant of the needs of society.[3]

Fundamentally the problem is one of reconciling the old and the new cultures. The prevailing curriculum is merely a collection of subjects devised by specialists from their own point of view instead of a coordinated whole organized with a view to modern requirements.[4] Even the so-called practical courses, for example, in the sciences, that were introduced by the reform of 1902 are bookish and academic and but little related to present demands.

While there is considerable unanimity in these criticisms, there is a parting of the ways when the proposals for reorganization are put forward. Two points of view can readily be distinguished. The one would turn the schools of France into trade and technical institutions and put the traditional elements on one side;[5] the other, recognizing the defects of the present secondary school, would aim at introducing a new spirit responsive to modern requirements, while retaining and emphasizing general education.[1] Both sides agree with the late M. Liard that the university of France needs at present "a deep bath of realism."[2]

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[1] Quoted in *L'Enseignement Secondaire*, July-December, 1918, p. 45. See also Faury, A. La guerre et l'esprit française. *La Grande Revue*, vol. 94, pp. 400ff.

[2] Bounhiol, J. P. Les leçons de la guerre pour l'enseignement secondaire. *La Grande Revue*, vol. 94, p. 487.

Brelet, H. *Revue Internationale de l'Enseignement, loc. cit.*; vol. 71, p. 487.

[3] Parthault. Pour une orientation pratique. *La Grand Revue*, vol. 94, pp. 534ff.

Perrotin, L. *L'enseignement Secondaire*, July–December, 1918, p. 45f.

[4] Bounhiol. *Loc. cit.*, p. 485.

[5] Hersent, G. *Le réforme de l'éducation nationale*. Paris, 1917. Une programme de l'éducation nationale. *Revue Universitaire*, vol. 27, pp. 306f.

While it is generally conceded that France must give greater attention than hitherto to technical and vocational training in all its branches, partly to repair the losses of war, partly as a preparation for the economic competition after the war, those who take the extreme radical view of the function of education are few in number. It is recognized that the danger is great of being dazzled by Germany's rapid industrial and commercial expansion in the past 30 or 40 years and her early success in the war, both of which are attributed to her systematic technical training. But it is also admitted that the fruits of victory will have been lost if the world goes to school to Germany, and if the materialism that characterised so much of her education is allowed to predominate, in spite of her defeat. The moral and humane functions of education are in danger of being relegated into the background if the schools are turned into miniature factories in which the youth of the land will specialize narrowly for the particular vocation that they have selected. There are many of those who see the urgency of technical and industrial education who agree with the advocates of general education that the primary purpose of education must be to raise the general level of intelligence, to train men and women who understand their duties as citizens and workers, to develop individuals with breadth of mind, devotion to the ideals of the nation, and interest in social questions instead of turning out human machines functioning solely for material ends.

The problem of education is not solely one of economic production or the training of engineers, technicians, and workers, but of developing men and women. Even if it is true that the basis of modern social organization is division of labor, it becomes more essential than ever to provide and prolong that education that gives all citizens a common background of general ideas and of a culture that stresses human values. The best preparation for specialized technical training is a good and extended general education. Those who argue that a general education can be obtained from specialized training run the risk of incurring failure in both. It is pointed out that in the most difficult and most technical branch of the army, the artillery, the graduates of the secondary schools were able to master the intricacies after a very brief training. To concede the situation entirely to those who demand technical and vocational preparation would involve a betrayal of the ideals for which the world has been fighting to the dangers of barbarism and materialism.[1]

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[1] Brelet, *loc. cit.; La Grande Revue*, vol. 94, pp. 396ff; pp. 471ff; pp. 512ff; pp. 534ff. Clavière, J. L'enseignement national après la guerre. *Revue Universitaire*, vol. 25, 2, pp. 64f.

[2] Bezard, J. Les leçons de la guerre dans l'enseignement secondaire. *La Grande Revue*, vol. 94, p. 465.

The real issue is, therefore, how to modernize the general education that is considered almost universally to be essential, how to redefine culture in modern terms, how to organize a liberal education adapted to the needs of modern society. As in Great Britain and Germany this problem resolves itself into a consideration of the value of the classics. Those who argue that the French and French culture are Celtic in origin would at once abandon the classics. The majority of those who discuss this question, however, are agreed that French culture is continuous with Latin, and that Latin must, therefore, be the basis of an education that aims to impart French culture, to strengthen the French points of view, and to fortify national ideals.[2] A classical education, it is felt by many, is all the more necessary to-day as the source of an ideal of humanity which is essential for the development of moral ideas and the evolution of society. The failure of classical education has not been inherent in the subjects taught, but in the methods employed, in the emphasis on erudition rather than on their spirit. It is even suggested that the Latinless course be eliminated from the secondary schools and relegated to the higher primary schools.

There is, on the other hand, a very pronounced opinion that in a scientific age, the sciences must form an important part of a liberal education. It is urged, however, that since science has no conscience and may serve a bad as well as a good cause, the emphasis in education should be placed on the relation of science to human welfare.[3] The greater extent to which an individual acquires a knowledge of the world of nature and of its manifestations, the nearer he approaches to a conception of his own place as a member of human society. It is conceded that the secondary schools may have neglected the sciences, but that does not establish its claim to absorb the whole of the curriculum. On this basis it is probable that, as in England, there will be no difficulty in reconciling the demands of the classicists and scientists. The reorganization of secondary education will demand the harmonious development side by side of the humanities and the sciences. A general secondary education will include, therefore, French, the classics, with exemptions for those unable to profit by them, modern languages, history and geography, mathematics and science, and philosophy. Specialization should be delayed as long as possible and be based on a general education of this character.[4] Such an education, it is argued, will reconcile the old and the new, the cultural and the utilitarian, the humanities and the sciences. On the basis of an education of this type those who are to become the nation's leaders can be trained, well prepared intellectually to meet the demands of modern society. Such an education should aim to develop not encyclopedists or academic scholars, but men of physical, moral, and intellectual strength. The function of secondary education would, therefore, be selective, to train the élite from all social classes to the position of leadership,[1] for as M. Steeg stated in presenting the budget of the Ministry of Education in 1911: "That an élite is necessary, it is not for democracy to deny; that an élite is necessary not only to maintain the prestige of society, but for the direction of the nation—on this point, I believe, that we can come to an agreement. The object of secondary education is the intellectual training of an élite which is destined to become directive and which must be prepared for its social rôle."[2]

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[1] Pécaut, F. La guerre et les pédagogues. *Revue Pédagogique*, pp. 512ff.

[2] See references in note 1, p. 15.

[3] Bezard, J. Les leçons de la guerre dans l'enseignement secondaire. *Le Grande Revue*, vol. 94, pp. 465ff.

[4] Bounhiol. *Loc. cit.*, pp. 480ff.

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[1] Besch. Le lycée et l'école primaire. *Revue Universitaire*, vol. 27, 1, p. 325.

[2] Brelet. *Loc. cit.*, vol. 71, p. 374.

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 44

MODERN EDUCATION IN CHINA

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WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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MODERN EDUCATION IN CHINA.

INTRODUCTION.

Americans often ask: "How do you find the Chinese students? How do they compare with American students?" My answer, after 15 years in China, is that the distinction between the oriental and the occidental lies in technique and in knowledge, not in intellectual caliber. While there are differences in point of view and in method of approach, there is no fundamental difference in intellectual character. The Chinese conception of life's values is so different from that of western peoples that they have failed to develop modern technique and scientific knowledge. Now that they have come to see the value of these, rapid and fundamental changes are taking place. When modern scientific knowledge is added to the skill which the Chinese already have in agriculture, commerce, industry, government, and military affairs, results will be achieved which will astonish the western world.

Religion, government, and reverence for antiquity have been the dominant influences in shaping the course of Chinese education. Confucianism, Buddhism, Taoism, and for the last century Christianity have directly and considerably influenced the development of the educational system. Unfamiliarity with the law of progress has led to undue respect for the ancient sages and has prevented radical reforms until they were imposed by the necessities of modern intercourse with the rest of the world. While the Chinese have been highly conservative, and their educational system has reflected this, their conservatism has its limits. Slow in making a departure, once the truth strikes home and its practicability is demonstrated, they do not hesitate at radical changes, nor are they discouraged by difficulties and obstructions.

The policy of providing modern education upon a national basis was adopted only a few years ago. When due allowance is made for this fact, China compares favorably in its educational history with the western world.

Though late in introducing reforms, China has always regarded education as of supreme importance. The change is not in the spirit, but in the character of the learning which that spirit admires.

Formerly cherishing solely the literary and ethical excellencies of ancient Chinese classics, she now extends her admiration to the practical realities and usefulness of western science, because in them she recognizes the instruments for the realization of new national and economic ideals.

Fortunately the people of China have long been democratic in spirit and so has been their educational system. To develop the individual into a man of virtue and culture and to secure social control through raising up leaders with ability and character to influence the lives of others have been the main motives of Chinese education throughout many centuries, and may well continue even with altered content of the curricula. For China today is more in need of true men than she is of merely modern methods.

I. THE CHANGE FROM THE OLD TO THE NEW.

The ancient system of education and its content have often been fully described. The gradual decadence of the schools themselves and the growth of the system of literary examinations as the means of providing candidates for government positions, followed in more recent times by modifications in the subject matter of the examinations and finally by the abolition of the examination system in toto—these fill the period from the really old to the really new education in China.

The last stages of this long period have been three, the changes becoming more and more rapid as we approach the present, the changes in education being concurrent with fundamental alterations in the political life of the nation. The transition from traditional to modern education began with the forced opening of the first five ports to foreign trade in 1842 and ended with the abolition of the ancient system of literary examinations in 1905. From 1905 to 1911 marks the construction period in which a modern educational system was actually applied with more or less success and frequent alteration. The year 1911 marks the end of the Manchu Dynasty and the beginning of the attempt to establish a republican form of government, involving necessarily also a reorganization of education so far as government auspices are concerned.

THE SIMULTANEOUS DEVELOPMENT OF REPRESENTATIVE GOVERNMENT AND GENERAL EDUCATION.

Either of these tasks taken separately would constitute a gigantic problem, whereas the fact is that they are so closely related and one so dependent on the other that the attempt to establish a democracy before adequate public education is had, or the attempt to establish an adequate system of schools before the Government is itself sufficiently stable to handle the financial burden thus involved, may well be regarded, especially when the size of China and her peculiar history are noted, as the greatest educational problem of all time, and one which will necessarily require several decades for its solution.

The time limits of the three periods just described apply to mission schools and colleges as well as to Government institutions, but with different characteristics. Missionaries were the pioneers of the first period, and their schools were practically unmatched by Government effort. Their work, however, did not have the scope and character which it assumed during the second period. There was no well-established educational policy; schools were opened as necessity arose and funds permitted and many were "called" to educational work who would have "chosen" some other form of missionary effort with better adjustment and greater efficiency had the demand not been so imperative. Only toward the end of the first period did the mission boards realize the tremendous importance of offering sound education under Christian auspices to the youth of awakening China. In the second period several fairly strong mission colleges and numerous high and lower schools were developed. These have not only served as models and stimulators of Government effort but have provided some of the large number of teachers demanded for the Government's own program. The third period has been one of coordination and affiliation between mission institutions, both locally and in large associations, while their opportunity for service is even greater to-day than it was in 1911 because the political uncertainty which has prevailed since then to date has with but few exceptions greatly handicapped Government institutions, chiefly through reduced revenue.

THE GOVERNMENT'S FIRST STEPS, 1862–1897.

Let us note briefly the main points of progress during these three stages of transition, construction, and reorganization. Naturally the first step of the Government after the opening of the treaty ports was to inaugurate schools for the training of the interpreters which this sudden increase in foreign intercourse demanded. Naturally also the first of these was established in the national capital in 1862, which in 1866 was raised to a so-called college grade by the addition of a scientific department. In 1868 Dr. W. A. P. Martin, an American missionary who had specialized in international law, was appointed to the staff and in 1869 became the first president of what is now known as the Government University of Peking (the American Methodist Mission having already taken for its school the name of "Peking University"). Reorganized in 1898, this institution in 1917 included, besides a preparatory department of some 600 boarding students with a teaching and administrative staff of 6 foreigners and 47 Chinese, a normal school, and four collegiate departments (letters, law, science, and engineering), with a total staff of 56 Chinese and 11 foreigners, and some 1,100 students. The preparatory school has just been abolished and a two-years' preparatory course incorporated in each of the collegiate depart- . Most of the Chinese instructors in the collegiate departments have been trained abroad, many of them having previously studied in mission schools.

Language schools were started also in Shanghai and Canton immediately after this Peking school. The Government next inaugurated technical and professional schools of various sorts and of varying excellence and fortune, as follows: 1869, Mechanical School, Shanghai; 1869, naval schools, Foochow; 1879, Telegraph College, Tientsin; 1887, Peiyang University, Tientsin; 1890, Naval College, Nanking; 1890, Mining and Engineering College, Wuchang; 1893, Army Medical College, Tientsin; 1897, Nanyan College, Shanghai.

Of these the two survivors worthy of more detailed notice are Peiyang University and Nanyang College, now called the Government Institute of Technology. Both of these are national schools and are supported in part with funds from the Telegraph Administration, the China Merchants' Steamship Navigation Co., and the superintendent of customs.

Although Peiyang University was inaugurated in 1887 when Dr. Charles D. Tenney was made president, organization was not effected until after the war with Japan (1894–95). Located in a suburb of Tientsin, this is now the best established Government school in China, comprising departments of general arts and sciences, law, and engineering, with about 300 boarding students and a staff of some 16 Chinese and 13 Europeans under the presidency of T. L. Chao.

The Government Institute of Technology, located in a suburb of Shanghai (the New York of China), was reorganized in 1897 by Dr. John C. Ferguson. It now has 600 students and a faculty of 14 Chinese and 6 Europeans.

It is interesting to note that all three of these Government institutions of first rank were inaugurated under American presidents who had previously been Christian missionaries, while to-day the president of each is a Chinese.

Concomitant with the development of these schools attempts were made to introduce reforms in the time-honored examination system itself. In 1869 mathematics was introduced; in 1875 the Viceroy Li Hung Chang advocated the physical sciences but failed to receive royal sanction. War with France in 1887 aroused the Government somewhat and natural sciences were introduced in the examination system to a limited extent, while mathematics received increased attention. The literary chancellors themselves were, of course, unfamiliar with the new subjects and very little was actually accomplished. Again the shock of a foreign conflict (Sino-Japanese War 1894–95) aroused not only the scholars of the realm but the Manchu

Emperor himself, who forthwith became an ardent student of western arts and sciences. The demand for the new learning became so great that within 18 months of the close of the war with Japan all modern schools throughout the land, whether under Government or mission auspices or private control, were overcrowded, and such, in fact, has been the condition ever since. The eagerness of the Chinese for modern education can not be overstated.

The greatest advocate and active promoter of these educational reforms was the illustrious Viceroy Chang Chih Tung, who not only inaugurated an ambitious university scheme at Wuchang, engaging many experts from America and several European countries,[1] but by his remarkable book, "Learn,"[2] of which millions of copies were distributed, prepared the minds of the people throughout the land for the sweeping reforms that were so soon to be launched. He outlined a complete system of schools and indicated the curricula from primary grades to university courses, embracing a mixture of Chinese classics and the modern learning of the West. He courageously advocated the abolishing of the "eight-legged essay" and its accompaniments, and suggested that Buddhist and Taoist temples be converted into schools and the temple lands and incomes used for educational purposes; which has been very largely done, though not until the unfortunate reactionary movement had culminated in the Boxer outbreak of 1900.

EDUCATIONAL HISTORY AND FOREIGN CONFLICTS.

The decade 1895 to 1905 was crowded with rapid developments and reactions. It is indeed curious that the educational history of so peace-loving a people as the Chinese should be definitely articulated with foreign conflicts. That decade is of intense interest alike to the student of China's educational development and of her international relations.

Ushered in by her war with Japan, it closed with the Russo-Japanese War, which involved the territory of her chief dependency and affected tremendously her whole future as a nation.

Aroused by the first of these conflicts the Emperor rapidly passed from a student to an ardent advocate of modern education, and issued in 1898 a series of most remarkable decrees, calling for the immediate inauguration of all the reforms suggested by Chang Chih Tung and even others. This literally shook the empire, and would doubtless have been successful but for the action of Yuan Shih Kai, then Viceroy of Chihli, and the most powerful military leader of the day. Warned by Yuan the Empress Dowager imprisoned the Emperor, and decapitated most of his progressive advisers. His edicts were annulled, newspapers were suppressed, the proposed schools were held in abeyance, the right to use temples was revoked, the eight-legged essay and the old order of examinations were restored.

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[1] These initial efforts were, however, not properly followed up and to-day yield only a memory.

[2] The precise Chinese title is Ch'uan Hsüeh P'ien or "An Exhortation to Learning;" a English translation is known as "China's Only Hope."

This policy continued until 1900, when the Boxer outbreak caused the temporary abandonment of all modern schools and colleges in northern China. Some of them, including the Peiyang University, were even completely destroyed. The ultimate result was helpful; for after China had been humbled, the program of educational reform was again adopted, and the Empress Dowager herself advocated the very measures she had so vigorously resisted only a short time before. Her decrees were even more far-reaching than those of 1898. Modern education progressed by leaps and bounds; and in the midst of reform came the Russo-Japanese War, which induced even greater efforts. The cry of the time was: What Japan has done, China can and will do. Students poured into the island empire, as many as 15,000. Returning from Japan, these became active in the cause of progress and reform, editing magazines and translating books, until a veritable flood of literature, much of it immature and violent, swept the reading public out of their lethargy.

PHASES OF THE CONSTRUCTIVE PERIOD.

While the earlier decrees provided for the official recognition of the graduates of modern schools, and for the modernization of the traditional schools, those of 1905 abolished the old system of examinations and the old style school as well, and provided that larger numbers of students be sent to Europe and America.

In 1903 a commission was appointed to devise a detailed plan for a national school system, and from 1905 to the end of the Manchu dynasty in 1911 there was an abundant issue of memorials, edicts, regulations, etc.,—enough to fill 12 volumes. While many of these became immediately and truly effective, many others were never fully realized, and one must read reports based on these documents with a questioning spirit, in view of the contrast between proposal and accomplishment. Even so the actual results appear truly remarkable considering the difficulties and the size of the problem.

These regulations and plans have undergone such frequent and even radical changes that it suffices for present purposes to indicate only the main features that have survived, and later to present in more detail the educational system now in force.

A ministry of education was created as one of the 11 great executive departments of the State. This assumed the educational functions previously assigned to the ministry of rites. It organized divisions to deal with general supervision, technical or special education, publication, industrial education, and finance. The present minister of education, Fu Tseng-hsiang, was appointed in December, 1917, to succeed Fan Yuan-lien, who has since been studying educational conditions in the United States and has only recently returned to China, but without official appointment.

Certain subsidiary central authorities are to be noted: A metropolitan board of education handles education in the national capital; the ministry of foreign affairs is in partial control of Tsing Hua College; the ministry of war of military schools throughout the country, and naval academies at Foochow, Tientsin, Chefoo, and Nanking; the ministry of communications of schools of telegraphy; the ministry of agriculture of special and agricultural schools; the ministry of finance of a school of finance in Peking; and the Controller of Customs of a special customs college in Peking.

The ministry of education, in 1906, defined the aim of the national educational system to be the inculcation of loyalty to the Emperor, reverence for Confucius, devotion to public welfare, admiration of the martial spirit and respect for industrial pursuits; of patriotism, morality, and the cooperative spirit as fundamental to a strong nation and the full realization of China's natural resources. Certainly a comprehensive and adequate aim. In 1906 also the unification and regulation of the numerous educational associations that had suddenly developed throughout the country was begun. Educational administration in the Provinces and in smaller local areas was outlined in great theoretical completeness but has fallen short in practice.

In connection with the old examination system an elaborate scheme of inspection and control had been established and naturally this same element has received considerable attention in all the new proposals.

The system prior to 1906 provided for a literary chancellor in each Province. This office, which originated about 1730 A. D., was an adaptation of that of superintendent of learning created at the beginning of the Manchu dynasty. The Literary Chancellor, acting for the Ministry of Rites, controlled the literary competitive examinations in his Province. He was assisted by a director of studies in each prefecture and a supervisor in each district.

According to the scheme of 1906, each Province was to have a commissioner of education appointed by the Throne on the recommendation of the ministry of education, coordinate in rank with the provincial treasurer and the provincial judge, and like them under the control of the viceroy or governor, who in turn was under the control of the ministry of education in all educational matters. Ordinarily, however, the commissioner of education was really the chief. Besides a local board of education appointed by the commissioner, each Province was provided with six inspectors, appointed by the governor on the nomination of the commissioner. In smaller territorial divisions, such as prefectures, subprefectures, departments, districts, and villages, the local civil authorities were responsible for carrying out the educational policy of the Province. Local "educational exhorting bureaus" were established with a district inspector appointed by the commissioner of education, as executive officer, who in turn selected an "educational promoter" for each school district. Finally there were school trustees elected by the people to look after the interests of the school in the village or district, and to see that funds were provided.

This plan of administration was altered in 1909 and again in 1912 and in 1913, when the scheme now in force was inaugurated as described in the next section.

In the summer of 1911 over 100 delegates from the Provinces attended in Peking the first conference of the Central Educational Council which had been created as an advisory body. Recommendations were adopted, but the revolution prevented their immediate application.

Along with the development of modern education there was a movement toward the adoption of a representative government which an imperial decree of 1908 had promised. The ministry of education prepared a special educational program hastening the development of popular education as the foundation for such a form of government. The year 1916 was the time appointed for its establishment. But the imposing program was never realized, for, first, the throne advanced the date of adopting the constitutional government from 1917 to 1913, and at the beginning of 1911 another program for the following two years was submitted and sanctioned only in turn to be cast aside in the political upheaval which resulted in the downfall of the Manchu dynasty at the end of that very year.

The schools and colleges of China contributed a great share to the revolutionary movement.

Beginning with October 10, 1911, attention became focused on the struggle for liberty and the progress of modern education under Government auspices throughout the country was temporarily checked, though mission schools were relatively little affected. Funds intended for educational institutions were used for armies. School buildings became soldiers' quarters; in some cases the entire school

II. THE PRESENT STATUS OF GOVERNMENT EDUCATION.

In 1913 a new scheme of national inspection divided the country into eight inspectorial divisions: (1) Chihli, Fengtien, Kirin, Heilungkiang; (2) Shantung, Shansi, Honan; (3) Kiangsu, Anhui, Chekiang; (4) Hupeh, Hunan, Kiangsi; (5) Shensi, Szechwan; (6) Kansu, Sinkiang; (7) Fukien, Kwangtung, Kwangsi; (8) Yunnan, Kweichow; each territorial division to have two inspectors. Mongolia and Tibet were temporarily subject to special regulations.

The office of inspector was made merely advisory in character in recognition of the fact that under the new Government central authority had become less arbitrary, while local authorities had assumed more power of self-government. This system of provincial and local administration of education was meant to be provisional in character, and the practice in the various provinces has been far from uniform. In most of the provinces a department of education is an integral part of the provincial administration; the chief of the department being appointed by the President of the Republic, while there are also provincial inspectors appointed by the governor of the province.

The school system established on the inauguration of the Republic is indicated by the following outline:

Ages.	Schools.	Length of course.
7-10	Lower primary	4 years, meant to be compulsory.
11-13	Higher primary	3 years.
	or	
	Industrial of Class B	Do.
14-17	Middle	4 years.
	or	
	Normal	4 years (1 year preparatory).
	or	
	Industrial of Class A	3 years.
18-24	University	3 years preparatory plus 3 or four years collegiate.
	Higher Normal	1 year preparatory plus 3 or 4 years collegiate.
	Professional school	Do.

Supplementary courses offering continuation of work for two years are provided for those graduates of both the lower and the higher primary schools who can not attend the school of higher grade.

Industrial schools of class A offer general industrial education while those of class B provide elementary industrial education or training in special trades.

Whereas before the revolution the responsibility of establishing primary schools was not placed upon any specific authority, the new administration definitely assigns this duty to cities, towns, and villages. The establishment of middle schools is left to the provincial authorities; and, for the first time in Chinese history, middle schools for girls are specifically provided for on the same basis as those for the boys.

Higher primary schools may be established only after a sufficient number of lower primary schools have been provided; and the establishment or abolition of any primary school, under either public or private auspices, must receive the sanction of the chief district administrative official, who also supervises all educational affairs entrusted to the heads and teachers of both grades of primary schools.

The minister of education may order the various Provinces to increase the number of middle schools. Districts possessing financial strength may establish district middle schools and individuals or corporations may establish private middle schools; but in every case the sanction of the minister of education must first be secured.

Schools to train for a special profession or vocation may be established by the Central Government, by provincial authorities, or by private enterprise. A middle school course or the equivalent is to be required for entrance.

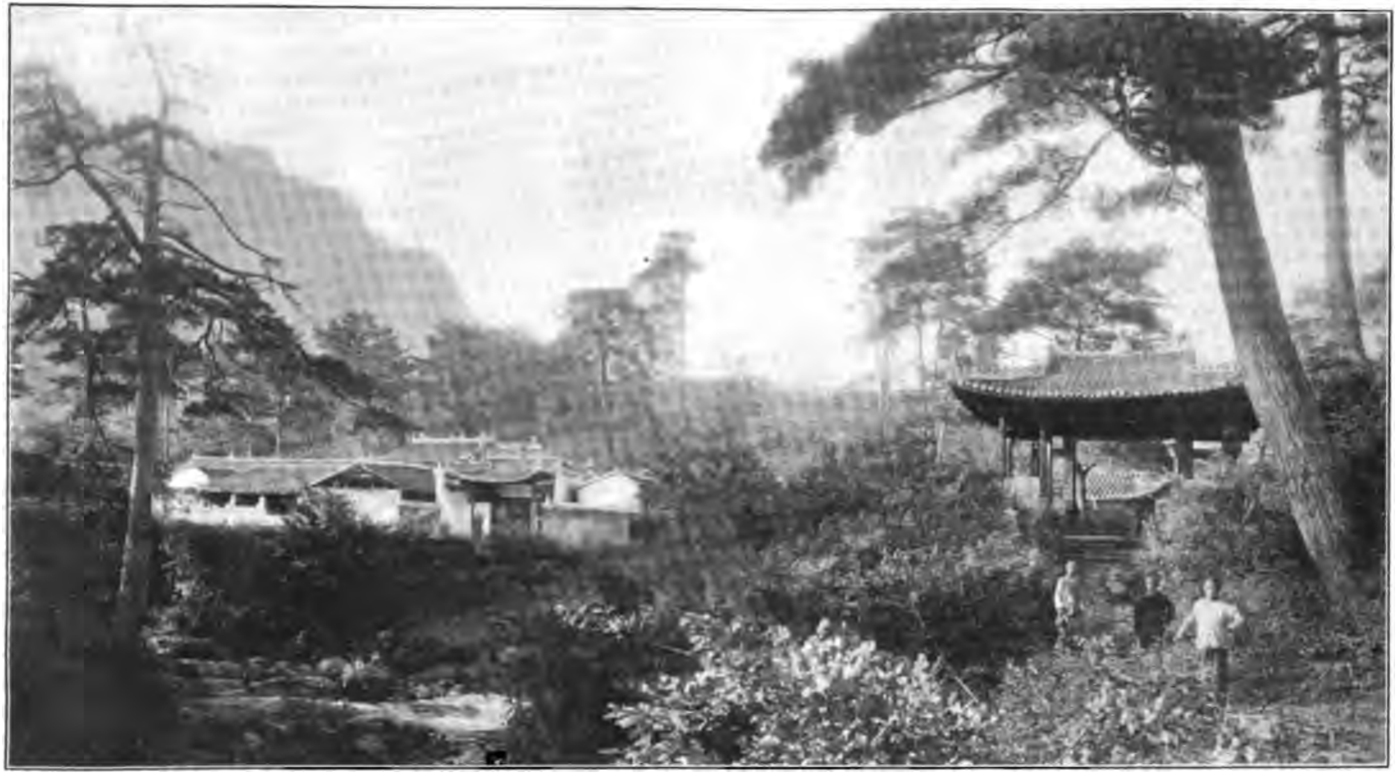
The normal schools aim to train elementary school teachers; the higher normal schools, teachers for middle and normal schools. Normal schools are established by the Provinces; while provincial higher normal schools are supported from the national treasury. An elementary school is attached to each normal school, and each higher normal school has one elementary school and one middle school attached to it. Normal schools for girls have kindergartens attached.

CURRICULA.

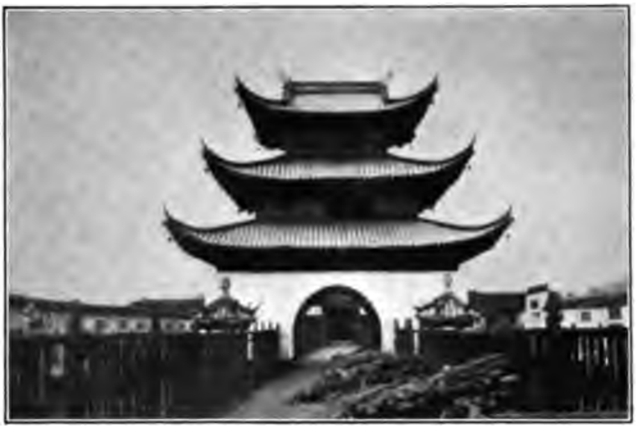
Curricula changes have included the elimination of Chinese classics as a subject in itself and the introduction of new subjects of study having a social and industrial significance. The scheme in force is as follows:

Lower primary school (four years).—Morals, mother tongue, mathematics, handwork, drawing, singing, and physical culture. Sewing for girls. Handwork is made compulsory. Hours per week: First year, 22; second year, 26; third and fourth years, 28 for boys and 29 for girls.

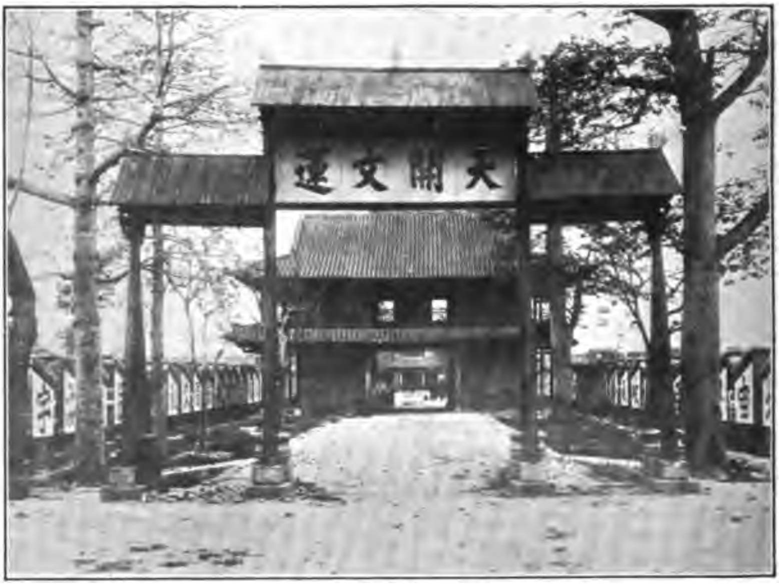
Higher primary school (three years).—Morals, mother tongue, mathematics, Chinese history, geography, physical science, handwork, drawing, singing, and physical culture, with agriculture for boys and sewing for girls. English or another foreign language may



GENERAL VIEW OF BUILDINGS OF THE COLLEGE OF THE WHITE DEER GROTTO.



A. LOOKOUT TOWER IN THE MIDST OF THE EXAMINATION HALLS AT NANKING.



B. MAIN CORRIDOR OF THE EXAMINATION HALLS, CANTON.

A. IMAGE OF CONFUCIUS IN THE COLLEGE OF THE WHITE DEER GROTTO.

B. EXAMINATION STALLS AT NANKING.

COURT OF THE CONFUCIAN HALL OF CLASSICS, PEKING.

be added. First year, 30 hours per week; second and third years, 30 for boys and 32 for girls.

Middle school (four years; only one course).—Morals, Chinese language, foreign language, history, geography, mathematics, nature study, physics, chemistry, government, economics, drawing, handwork, music, physical culture. First year, 33 recitations; second, 34; third and fourth years, 35.

Girls' middle schools.—Household arts, gardening and sewing are required; one hour less per week in each year being required than in the case of boys' middle school.

Although in 1909 two parallel courses of study were outlined for middle schools, the one industrial and emphasizing science, the other literary, emphasizing the classics, in 1911 the two courses, as indicated in the schedule just cited, were fused and made lower in grade and more general in character, owing partly to the lack of qualified teachers and students and the expense of adequate equipment and partly to a feeling that secondary education in China should not be highly specialized for the present.

Boys' normal school (two courses of study).—Ethics, education, Chinese language, writing, English, history, geography, mathematics, nature study, physics and chemistry, civics and economics, drawing, handwork, agriculture, music, and physical culture. Course A: The preparatory course, 32 hours per week; regular course, 33 first year; 35 for each of the remaining three years. Course B: Ethics, education, Chinese literature, mathematics, nature study, physics and chemistry, drawing, handwork, agriculture, music, and physical culture. Thirty-five hours per week.

Girls' normal school.—Generally similar to that for boys, except that agriculture is omitted and household arts, gardening, and sewing are added. The number of recitations is slightly larger than that required in boys' normal schools; however, English, requiring three hours per week, may be omitted.

Higher normal school is divided into three courses. (1) Preparatory: Ethics, Chinese language, English, mathematics, drawing, singing, and physical culture. (2) A regular course is offered in one of the following departments: (*a*) Chinese language; (*b*) English; (*c*) history and geography; (*d*) mathematics and physics; (*e*) physics and chemistry; and (*f*) nature study. All the departments have the following subjects in common: Ethics, psychology, education, English, and physical culture. (3) A so-called "research course" of intensive study in two or three subjects of the regular course.

The dominance of the classics in the modern schools of China has lasted for a very short time compared with the struggle against the classics in the educational history of other nations.

The organization of the *university* differs from that in force before the revolution in that the faculty of classics has been dropped. The preparatory department of the university has three groups of studies covering a three years' course. The first is for those wishing to enter the faculties of arts, law, or commerce; the second prepares for science, applied science, agriculture, or pharmacy; and the third prepares for the study of medicine.

There are five educational institutions of higher grade under the Government that are worthy of note. The work at the Government University of Peking, at Peiyang University near Tientsin, and at the Government Institute of Technology near Shanghai, has already been mentioned. Of Tsing Hua College near Peking and of the Teachers' College at Nanking we shall presently give some detail. Government universities are said to be contemplated at Nanking, Wuchang, and Canton but have not been organized as yet.

PROBLEMS BEING SOLVED.

Among present problems that are being solved we note:—The more adequate rôle of the school in the development of moral character, the strengthening of school discipline, the more effective adjustment of education to the life of the pupil and the needs of the community, and, most important of all, the provision of a more adequate corps of qualified teachers through whom alone can these other problems be satisfactorily handled.

Some of the most important general problems remain unsolved, namely, the financing of the public-school system, the provision of universal education, and the relation of missionary institutions to the public educational system.

DEVELOPMENT OF MORAL CHARACTER.

The classics, which formerly constituted the center of the curriculum and supplied the ethical and moral ideals which produced such marked qualities in the Chinese people as a whole for many centuries, are now largely set aside. But even in the period of transition ethical instruction has had a prominent place in the curriculum, and since the inauguration of the Republic has received increased emphasis.

If it is remembered that before Abraham left Ur of the Chaldees China's system of education began, and that with a revision in 627 A. D. it continued until 1905 to drill all the scholars and statesmen of the realm in a system of ethics the cardinal principle of which is filial piety; and if their history is then compared with the promise contained in the Hebrew Decalogue which says "Honor thy father and thy mother, that thy days may be long in the land which the Lord thy God giveth thee," it may readily be believed that here is at least one of the reasons for the survival of the Chinese people.

Of course practice is better than precept; and much remains to be accomplished in the line of providing teachers who will themselves truly exemplify the principles of right conduct and also provide opportunities for the spontaneous and proper expression of right instincts and impulses on the part of their pupils. This problem is intensified by reason of the long-established custom of suppression practiced by the old-style Chinese teacher.

SCHOOL DISCIPLINE.

During the first decade of the new education student bodies were noted for their unruliness; strikes and even riots were fairly frequent. This tendency to insubordination arose partly from a wrong conception of liberty and partly from the fact that the student body often included those advanced in age. Intensely nationalistic and eager to exert their influence, Chinese students have seized every political crisis to hold mass meetings, resulting in either advice or protest to the Government. The attempt to suppress these outbursts naturally caused friction, and the situation was often badly handled by school officials through lack of authority or of administrative ability. Sometimes the teaching body was to blame either because of an overbearing and haughty attitude or because of slackness and indifference. Owing to the enormous demand for teachers in these earlier years, many were appointed who were totally unprepared in both mind and spirit for the work of teaching. This problem of school discipline has begun to diminish as a better trained corps of teachers and administrators is being provided.

ADJUSTMENT OF EDUCATION TO LIFE NEEDS.

The effective relating of education to the life of those who receive it has yet to be accomplished in China. The conflict between book learning and the newer and more practical forms of education is now on in China just as it was not long ago in western countries, in which it is not even yet fully settled. The deeper questions of content and of method, such as have been raised by the necessities of war training in America, apply in a peculiar way also to China. Until very recently there was on the part of mission schools and colleges and also on the part of Government institutions too much of a tendency to import a foreign cap for the Chinese pate, and while the error of this way is now fully realized the questions of curricula are still largely unsolved. Many experiments are being tried and much progress is being made, especially in the institutions where educational traditions are not overemphasized, and where there is a genuine desire to make education the real threshold to an efficient and happy life on the part of each pupil.

In the first place the former conception of education as preparation for official life, though greatly diminished, has not yet been completely replaced in the Chinese ~~public~~ mind by the broader idea of education as a training of each man for all phases of the life he is to live.

Secondly, in importing content and even method bodily from America (for the importation of educational ideas has been chiefly from America), there has been too little regard for the modifications that should be determined in view of the peculiar history of the pupils, racially and as individuals, and of the present-day status of their community in all phases of its life and of the need for an approximate but vital adjustment and solution of the many problems which China faces and which only her own citizens, properly trained and ~~inspired, can~~ solve.

In learning from the west, care must be taken not to sacrifice what is really essential in Chinese culture itself; there should be fusion, not substitution, and the fusion should be effected gradually rather than too radically. More attention should be paid to the acquisition of special skill rather than advancement in memory studies; and wherever possible all subjects, including history and other social sciences, should ~~be taught~~ by the laboratory method as well as the natural sciences. In fact, laboratory and field work should predominate. Only so can commercial, industrial, social, and spiritual reform be adequately promoted by and in the rising generations.

SUPPLY OF TEACHERS.

The greatest impediment to the progress of modern education in China has been and still is the lack of competent teachers in sufficient numbers. It has been impossible to recruit teachers from the old schools to any extent, because of the peculiar nature of both the content and the method of the old learning and also because of the conservatism of the old-style teacher.

The most available source of able teachers has been found among the graduates of the mission schools, but this supply is far below the demand, which naturally is constantly rising both in numbers and quality.

The next most immediate source was in the first decade found among those literati who attempted to prepare themselves as modern teachers by special short-cut study. Their chief recommendation was their earnestness, but even so they could hardly be depended on except as a temporary makeshift.

The use of foreign teachers has been confined to the higher institutions, beginning with the middle and normal schools. The number of such, however, has never been very large. In 1911 the total number of foreign teachers (this includes Japanese, of course, as well as Europeans and Americans) was but 545; in 1917, probably not more than 600.

At one time the number of Japanese instructors engaged in provincial middle and normal schools was quite large, but for a combination of reasons their employment has for the last decade almost entirely ceased.

The number of teachers recruited from students returned from abroad has been relatively small. Even those who have found positions in the schools rarely expect to devote their lives to teaching. There is great need that a larger number of Chinese students trained in America and Europe should respond definitely to the call of their country for well-trained native teachers and educational administrators. In more recent years some of the ablest of the returned students have gone into school work, but there is still an urgent need for a more adequate response in the right spirit. Too many of even the relatively small number who have entered educational work have failed to realize their obligations and opportunities and the necessity of a gradual development of their own capacities for the higher positions.

The ministry of education reported for 1918 a total of 150,000 teachers as against 89,766 for 1910 and 63,566 for 1908. Of these 84,755 were in schools of general culture, 2,712 in technical and vocational schools, and 2,299 in normal and teachers' training schools. While the largest number of teachers in the lower schools is found among the graduates of Chinese normal schools and training institutes, until quite recently the material attracted to the normal schools has been of relatively poor quality. The increase in numbers has, however, been very rapid.

The total number of students in normal schools and training institutes has grown as follows: 1903, 80; 1904, 2,400; 1905, 5,321; 1910, 28,572; 1918, 29,500. According to the Educational Directory of 1918 the number of Government normal schools of all types numbered 188, only 7 of which, however, offered the full higher normal course.

The most hopeful sign of the times with reference to the normal-school problem in China is the very effective and rapidly growing Teachers' College, which has been inaugurated at Nanking under

Dr. P. W. Kuo, a graduate of Columbia University. This institution founded in 1914 had in 1917 a faculty of 14 returned students from America, 8 Chinese instructors without modern degrees, and 2 Americans. The college is for men only, the average age of its 283 students being 22. A vocational middle school was opened in 1917 with 95 pupils. There is a primary practice school in connection with the college. This institution is serving as a model and its influence is being strongly felt. There is great need for more and better normal schools of this higher type to train teachers for the secondary schools.

UNSOLVED PROBLEMS.

Some of the most important general problems remain unsolved; namely, the financing of the public-school system, the provision of universal education, and the relation of missionary institutions to the public educational system.

FINANCE.

Funds for the maintenance of education are supposed to be regular items of the national and provincial budgets. The sources of revenue have been indicated as follows: (1) Income from public property, (2) interest from deposits, (3) Government appropriations, (4) public funds, (5) tuition and fees, (6) compulsory contributions, (7) voluntary contributions, and (8) miscellaneous sources of income. Some of the ways by which money has been raised are extremely interesting and at times pathetic. Money formerly devoted to religious processions, theatrical exhibitions, and clan ancestral halls is sometimes put into the school fund. Temples and monasteries were converted into schools, and temple lands and incomes appropriated. In some cases the return from gambling licenses has been devoted in part to education. Official recognition is offered to encourage private munificence. Some of the Provinces have increased the rate of certain local taxes, but such increases are said to have been generally small. Since the establishment of the Republic the practice of increasing the rate of local taxes for educational purposes has become more general, but as yet no system of general taxation has been evolved.

There is moreover a failure to discriminate properly between the Government tax and the local tax, and there is a constant conflict between the central and provincial governments as to remittances.

The solution of the problem of financing the new educational system is dependent upon the larger problem of the national revenue. Thus far the fiscal aspect of China's national life has been far from atisfactory. The successive and excessive revolutions have played havoc with China's finances, and years must elapse before their effect ceases to be felt. It is estimated that the first revolution alone cost China in additional public expenditures and private losses a sum of about $172,000,000 United States currency, aside from the complete cessation of internal revenue for several months. The burden of maintaining the military in China is proportionately greater than in any other country not actually at war, amounting to as much as 40 per cent of her total national budget.

The simplest method of increasing China's revenue would be to increase the customs import duty which has stood for years at only 5 per cent, but this requires an international agreement on the part of the leading foreign powers in treaty with China who recently offered, in return for China's joining the Allies, to permit an increase to 7 per cent (really only an effective 5 per cent owing to scale of values adopted), which is still remarkably low when it is considered that many Chinese products entering the United States pay from 25 to 60 per cent duty. Unable of herself to determine her own policy of customs revenue, China's only hope for independence lies in the true observance of the open-door policy and the development of her natural resources with the financial and technical assistance of America and Great Britain and Japan; but in association, not separately. China's natural resources and her cheap and abundant labor still await proper development and application as the basis of all other prosperity, including educational development, and in turn popular education is a necessary accompaniment and adjunct of this material development.

One step toward a solution of the financial problem of general education would be the elimination of the great surplus of nonteaching officers; while in 1910 the Government teaching force numbered less than 90,000, the number of purely administrative officers was nearly 96,000. In 1918 there were probably 157,000 officers out of a total staff of 326,000. Private schools and those under mission auspices also should be encouraged, thus reducing the Government's burden at least for a time.

When in 1910 lack of funds prevented the establishment of a sufficient number of modern elementary schools for the masses, and an effort was made to reform the traditional schools already found throughout the country by introducing modern textbooks, etc., a scheme of inspection and reward brought surprising results; for example, in Peking, at an expense for awards of about $1,000, United States currency, no less than 172 of these schools with 4,300 pupils were developed within two years. Similar results were secured throughout the country, but statistics are not available.

UNIVERSAL EDUCATION.

The problem of supplying educational facilities for China's millions is so gigantic in its scope and so complicated in its character that its successful solution calls for not only the highest professional skill, but an even greater enthusiasm, patriotism, and altruism. Since the establishment of the Republic the problem of universal education has loomed large in the minds of Chinese statesmen and educators. Preliminary steps taken by the Ministry of Education have included an effort to establish compulsory education between the ages of 7 and 14; but naturally this is as yet largely unrealized, through lack of organization. Emphasis is now properly being placed on primary education, though at first Government educational plans were decidedly "top-heavy." Combinations recently effected in higher education have permitted more money to be devoted to primary schools.

Reliable data are not available but it appears that the proportion of children of school age who attend school varies considerably among the provinces, in some being as low as one-fortieth, in others rising to nearly a half.

Some idea of the growth of the Government effort in education may be had from the following data as to the number of schools of all grades under various native auspices:

Number of schools of all grades.

Years.	Government.	Public.	Private.	Total
1905	3,605	393	224	4,222
1910	14,301	32,254	5,793	52,238
1915 [1]				122,286
1916 [1]				129,739
1918 [1]				134,000

[1] Details not available.

Of this total number of schools probably 125,000 are lower primary.

The total enrollment in schools under various native auspices in 1905 was 102,767, and in 1910, 1,625,534, whereas in 1903 there were but 1,274 students in all modern schools under native auspices. For 1917–18 the enrollment has been reported as 4,500,000, with an expenditure of about $40,000,000 (silver).

This problem of education for China's millions is fraught with difficulties. There should be 1,000,000 schools instead of 134,000, and an addition of 2,000,000 teachers, with all that is involved in the preparation of these teachers and the financing of the program.

Then there is the language difficulty. Since the Chinese language is not alphabetical, but ideographic, learning to read is a much harder task than in most countries; and this is intensified by the fact that the written language is not the same as the spoken tongue, and that the spoken language is not the same over the country, but is subject to numerous dialects. The language difficulty is being overcome by: (1) Substitution of a rational process of learning the meaning instead of merely memorizing the sound of the character, as was the old style in elementary instruction; (2) use of graded and illustrated readers; (3) publication of books and papers in the vernacular specially adapted to the daily speech of the people; (4) in the hands of modern trained Chinese the written language proper is growing clearer through simplification of style and introduction of punctuation; (5) a more widespread and insistent emphasis on the study of Mandarin in all schools, in order to hasten the unification of the spoken language throughout China; and (6) a more widespread use of a properly developed romanized or phonetic form of the written language.

But development of the language so as to be able adequately to express the content of modern knowledge presents a most tremendous problem, which only native scholars highly trained in modern thought and equally familiar with their native tongue and its previous development can solve. It will take time, but this difficulty will ultimately be overcome. It is, however, an even greater problem than would have been presented had all the content of modern knowledge knocked at the door of eleventh-century English and demanded immediate expression. So long as this language difficulty remains so largely unsolved it will be necessary to conduct the higher grades of instruction in the sciences with English as the medium—at least for those who are themselves to be leaders in the renaissance. To have a share in the preparation of men who will solve this problem is about as far as the foreigner can hope to go.

GOVERNMENT ATTITUDE TOWARD MISSIONARY EDUCATION.[1]

Under the Manchu dynasty graduates of missionary schools were denied Government degrees and titles, and the schools were not even asked to register. When the franchise for the election of representatives to the provincial assemblies was given to certain classes of people the graduates of Government institutions were included, but not those of mission colleges. This discrimination was made, it is said, to preserve the national character of the new educational movement, and was neither anti-Christian nor anti-foreign. Though no definite action has yet been taken by the new Government regarding the relation of missionary education to the Government system, the subject is being studied.

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[1] This section is based on Teachers College, Columbia University, Contributions to Education No. 64, by P. W. Kuo, New York, 1915, pp. 136–140.

The situations in Japan and India throw some light on the problem. In Japan a Christian school may hold one of three relations to the Government: (1) Government sanction involving practically no regulation or inspection, and imposing no religious restriction. (2) Recognition as a school of a certain grade, implying certain privileges and imposing certain conditions, but permitting full religious freedom. The chief privileges are the postponement of military conscription, admission to the higher Government schools, and the one-year voluntary military service after graduation. The chief conditions accompanying this form of recognition are that the curriculum of the school must, in the main, conform to that of the Government middle schools; certain regulations are imposed to safeguard the standard of the school; and the school must always be open to inspection. (3) Recognition of the school as an integral part of the Government system, subject to all the requirements and enjoying all the privileges of a regular Government school. It is supposed that this form confers greater prestige; but, of course, that depends on the true value of the Government's own institutions, and while of weight in Japan hardly applies in China, as yet. This form of recognition prohibits religious teaching and religious services. The prohibition is, however, carried out with varying degrees of strictness, according to the attitude of local officials. In most schools voluntary classes in religion are allowed at some time of the day either in or outside of the school buildings.

In India, where the educational system consists of institutions organized by private initiative but aided by Government grants, missionary schools, like other private schools, receive grants-in-aid if they are efficient in the secular instruction conveyed, whatever may be the arrangements for religious instruction. The amount and continuance of the assistance given depends upon the periodical report of the inspectors, who take no notice of the religious instruction, but merely ascertain whether the character of the secular instruction entitles the school to consideration in the distribution of the grants-in-aid.

The system of recognition which China might adopt should require the fulfillment of certain educational standards, but take no account of the religious teaching. Some missionaries consider that even the third form of the Japanese system is desirable, claiming that a better class of students will come to schools having this form of recognition, and that they receive religious instruction gladly and heartily when attendance is voluntary, so that though the direct results may be less, they are not forced products, but are of genuine and healthy growth; and that the school can be kept Christian in tone by other channels than the classroom.

There will need to be considerable progress in the Government's own educational program, and especially in the settling of its policy and in the choice of qualified administrators, before the missionary institutions could justifiably be subjected to any degree of real governmental control. And yet in due time the Government should exercise legitimate supervision of the educational work of the missionaries, as well as of other private educational institutions, so as to utilize all educational agencies to supplement the national educational work.

SCHOOL FEES.

Tuition in Government schools is determined by the head of the school concerned in accordance with the standard set by the ministry of education. In private schools it is determined by the organizers, but must be reported. Fees are charged at a monthly rate not exceeding the following schedule: Lower primary, 30 cents (Chinese currency); higher primary and elementary industrial, 60 cents; middle schools, one to two dollars; higher industrial, 80 cents to a dollar and a half; professional schools, two dollars to two and a half; university, three dollars; normal and higher normal, tuition free and cash allowances made to students.

The school year is divided into three terms: August 1 to December 31, January 1 to March 31, April 1 to July 31; summer vacation is from 30 to 50 days in July and August. Schools are closed on Sundays and on memorial days such as the anniversary of the inauguration of the Republic, October 10, and the birthday of Confucius; on these days special exercises are held.

Mission schools generally observe a two-semester year, September to January both inclusive, and February to June. Several also conduct summer schools in July or August.

Tuition fees in mission schools vary from nothing to a substantial figure in the best established institutions. As a rule the fees are small in the elementary schools, as these are often maintained chiefly for children of church members; in secondary schools the rates rise and in some of the mission colleges such as St. John at Shanghai, Yali at Changsha and Canton Christian College no difficulty is encountered in more than filling all available space at a tuition relatively much higher than is common in America. At Canton Christian College, for instance, the annual tuition is 15 to 25 times the cost of table board for one month, whereas in an American college with a tuition of say $150 for the year, table board would ordinarily not necessarily exceed $30 to $50 per month, a ratio of only one-fifth or one third. Of course in institutions where these higher fees prevail, numerous scholarships are required to provide for the poor but worthy student.

DEGREES.

When in 1905 the ancient system of literary examinations was abolished, the old style Chinese degrees naturally ceased also. It was then proposed to grant official degrees to graduates of Government colleges and to students returning from abroad upon their passing special examinations. This was abandoned in 1911 when a new civil service was inaugurated entirely separate from the educational system. Graduation from a college itself now confers a degree, which, however, is purely academic and carries no privilege of official preferment. Graduates of college or university receive the degree of "Chin Shih;" graduates of a high school and others of equal rank receive a "Kung Shen;" while graduates of a higher primary or lower industrial school receive a "Sheng Yüan."

American mission colleges grant the B. A. degree under supervision of the educational authorities of the State in which the home board of trustees may be organized. St. John's College at Shanghai, for instance, is subject to the final educational control of the District of Columbia, while Nanking University and Canton Christian College are under the Regents of the University of the State of New York, and their diplomas are granted under the Regents' supervision and seal.

STUDENTS ABROAD.

An important phase of modern educational development in China is that connected with the going abroad to study of a large number of young men and women. The earliest of these went to America and England in the seventies, but the most marked exodus was that to Japan after 1905.

Many of these students returning from Japan became strenuous agitators for reforms, often with no appreciation of the difficulties that could only gradually be overcome, and the Chinese Government at one time imposed restrictions on this exodus to Japan. In more recent years the numbers have been smaller from an entirely different cause. Owing to various actions and demands of Japan the patriotic spirit of the Chinese students has been now and again aroused and forthwith expressed by a protest in the form of a boycott of Japanese institutions. The most recent of these was in the spring of 1918 when practically every Chinese student in Japan either returned home or at least ceased to attend school. The second predominant factor has been the establishment of the so-called "indemnity scholarships" for study in America and the development of Tsing Hua College near Peking for the preliminary training of those who are to enter on such scholarships. According to the original plan 50 students are to be sent each year to the United States on indemnity scholarships beginning with 1909. At first these were sent directly from various schools, chiefly the mission colleges, throughout China, after passing competitive examinations in Peking; then in 1911 the Middle School at Tsing Hua was established and now only candidates who first pass through this school are sent to the United States on indemnity scholarships. Others have been sent on scholarships from the provincial governments, especially since the inauguration of the Republic. Tsing Hua is now aiming to develop a collegiate department of its own so that hereafter most of the indemnity scholars coming to America will come for graduate work only. While we believe that many of those who have come thus far have come at too early a stage, there will not be a true fulfillment of the purposes of the foundation in promoting the mutual relations of China and America if this development of higher work at Tsing Hua prevents an adequate number of qualified students from actually reaching America: for only by their bringing to Americans through personal contact in the United States an appreciation of Chinese characteristics and taking back to China the best that our civilization in all its phases has to offer them can the two peoples be brought effectively together, which is the real purpose underlying the return of the indemnity fund.

In 1917 Tsing Hua College had an enrollment of 624, all boarders, of an average age of 16, while the staff included 25 Chinese trained in the United States, and 17 Americans, as well as 19 Chinese without a foreign training.

It is reported that the Japanese Government has proposed to use a part of the 1900 indemnity fund still due to it in the establishing in Peking of a school similar to Tsing Hua, in which students will be prepared under a faculty of Japanese and Chinese returned from Japan, for further study in Japan; and thus form a basis for the development of a better mutual understanding.

Prior to 1907 students abroad were under the care of China's diplomatic representatives. In 1907 a Chinese Educational Mission was organized to supervise all such students, especially those sent under indemnity scholarships, and in 1913 all students supported by the provincial governments also came under this educational mission's general supervision. In 1909 there were in Tokyo 1,992 Chinese Government students in collegiate schools and 395 in military schools, totaling 2,387: besides 2,500 private students. In 1910 5,000 private Chinese students were resident in Japan, 150 of them women. The same year in the United Kingdom there were some 140 Chinese Government scholarship students and an equal number supported by private funds: in Belgium, 70 Government students: in France, 80; in Germany, 60; in Austria, 10; in Russia, 15. No information as to the number of private students in these countries is available. In the

United States in 1910 there were at least 600. For the academic year 1918–19, besides 373 "indemnity students" in this country, 38 of whom are women, there are 30 students supported by the Central Government and 183 supported by various provincial governments, of whom 8 are women. There are also some 764 studying in America on their own resources (the number of women in this group has not been available); making a total of 1,350, of whom 250 are in preparatory school and 1,100 in college.

EDUCATION OF WOMEN.

Although women had no proper place in the old educational system of China, almost immediately after the new era dawned for men came that for women also. Of course mission schools for girls have existed for many years (since 1844) but they have never had adequate emphasis, and even to-day there are not more than three institutions in all China where women can get collegiate training of proper grade; these are all under American mission auspices. It was 50 years after the opening of the first mission school for girls that the first modern school for girls under Chinees auspices was opened (Shanghai, 1897).

Prior to 1907 Government officials emphasized the importance of educating women, and some of the Provinces established girls' schools, but the Central Government attempted neither to provide nor to regulate them. In 1907, however, official provision was made not only for primary schools for girls, but also for normal schools, and women have been given Government scholarships for study abroad. At the present time there are 46 such in the United States, and about 80 others dependent on private support.[1]

There are to-day scores of girls' normal schools of more or less excellence, and Chinese opinion is rapidly developing a new status for the women of Cathay. Certainly there is no more significant factor in the renaissance of China than this; but very much yet remains to be done, and many first-class high schools and a few first-class colleges for women are greatly needed.

Among the higher educational institutions in Canton, for instance, which attempt to serve a region of approximately 30,000,000 population, there is no provision for college work for women, except at the Canton Christian College, in connection with the regular courses for men also, and no adequate provision for first-class high school education for girls, though at least one of the mission schools is aiming to develop such. It is a time for the concentration of all forces whose combined strength will be needed to meet the opportunity adequately.

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[1] Data as reported through the Chinese Students' Alliance and through the Educational Commissioner in Washington differ.

III. EDUCATIONAL NEEDS AFFECTED BY INTERNAL CONDITION AND INTERNATIONAL SITUATION.

A review of China's internal condition and international relations leads to certain conclusions regarding the types of education most urgently needed.

The knowledge, morality, comfort, and organization of the Chinese people are all below the level that might be maintained. The earth brings forth plentifully, but the homes of the people are barren and squalid. In spite of the wonderful career of that great and awful Manchu woman, the late Empress Dowager, the place of woman in general is low, and home life is impoverished. The ethical standards of Confucius are very high, and in some respects the morality of the people is greater than in most other nations, but in many respects their ideals are very low. Modern science has not sufficient development to offset demonism and superstition as potent factors in the life of the people. China is not yet able to conduct her own educational work successfully without at least a measure of outside assistance. Her material development is only begun, and her moral development is slow. The arguments for large educational effort derived from these facts are largely independent of the critical situation of China at the moment, except as the factors mentioned have been in part responsible for her coming into that situation; but these arguments are greatly reenforced by the special conditions existing in China at this time and affecting the whole international situation.

China is destined to become one of the foremost producing nations of the world, a vast market, a huge stabilizing, peaceful power if allowed to develop its great wealth in its own way. The problem of China is a world problem, culturally as well as commercially.

Western nations, having forced their intercourse on China, have now the responsibility to safeguard her independence and the best interests of the Chinese people as well as to look after the development of trade.

The issue in the Orient is sharply drawn: Independent national development for China, and continued progress of the other free Asiastic States; or the subjection of China, and the endangering of all free nationality in Asia.

The loss of free nationality in Asia would be a calamity to mankind. However justly the occidental may pride himself on his mastery of the art of living, however truly he may rejoice in his achievements throughout the whole reach of life, a sane modesty, taught him by his own science, should keep him from regarding western peoples as the whole race of man, or from looking with scorn upon entire divisions of the race, whom his training has not fitted him to appreciate.

A proper reverence for humanity will not allow him to exalt his own position at the expense of the entire East, or to attempt crudely to force upon a whole continent external domination or those forms of civilization which are the product in some part of himself.

From the higher level of human development we may feel that the world is destined to profit greatly by events in the Far East if they result in restoring to humanity the whole of Asia, free to join in making the history of the next hundred years, free to be itself and to supplement, with all of good there is manifest or dormant in it, the strength and goodness of the West.

The shortest road to a partial success in this endeavor to preserve free nationality in Asia is the development of China's material resources, which will not only enrich China and the world, but will help to arouse the people from their age-long sleep, and to create a sense of nationhood.

But China's independence should concern her friends in the West chiefly because such independence is essential to something far more important: True freedom for the Chinese people. The dormant powers now awakening in this race and promising such a future for it in the commercial and political affairs of the world demand imperatively that there be set in motion, side by side with this material transformation, forces far more subtle that shall bring about a true renaissance of the nation by influencing profoundly the intellect and the soul of the race. Only so can the Chinese people be speedily restored to the modern world.

It is significant that the greatest physical achievement of the ancient Chinese, the Great Wall, which was constructed to shut out foreign intruders, has been broken down in all essential respects, and China is to-day fairly ready for foreign assistance in solving her problems, if it be friendly and not predatory.

This nation, whose past achievements rank among the wonders of history, this ancient and largest of all the nations. lies helpless among the powers of the present day, surviving through the protection arising from the balance of competitive interests of the larger powers.

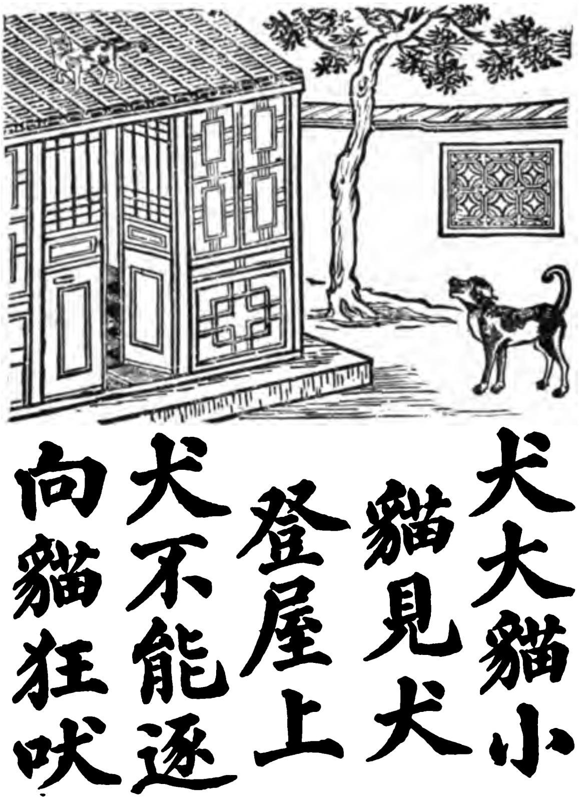
The reason for this is complex, but the solution is clear. The introduction of foreign capital, the internationalization of foreign

A. LITTLE NURSES CARRYING BABY BROTHERS.

B. STREET SCENE IN HONGKONG.

A. CLASS IN ARITHMETIC IN THE METHODIST MISSION, CHIN KIANG.

B. ENTRANCE TO PROVINCIAL BUREAU OF EDUCATION, CANTON.



犬大貓小
貓見犬
登屋上
犬不能逐
向貓狂吠

A PAGE FROM A MODERN CHINESE PRIMER.

A. Entrance to grounds.

B. Reception Hall.

PROVINCIAL COLLEGE, TSINAN, SHANTUNG.

interests in a cooperative spirit with China, and the supervision by a league of nations constitute the chief hope at present for China's foreign relations and even for her internal development. The fundamental element in all this from the Chinese side is more general education of the people to give the background for progress and the training of native leaders upon whom must rest the responsibility for carrying out in detail such plans as may be formed for the alleviation of present conditions. In order to determine just what methods should be followed, there is at the present time a most important function for foreign experts to fill in connection with the development of China. Their work is a necessary preliminary, and hence it is all important that China seek and use the assistance of such men, although it is also true that her need for such assistance will be temporary, and the application of the remedies which they may suggest after a study of the field will still depend upon native talent.

It is just here that one of the functions of our mission colleges in China comes in—to train these leaders in situ, without loss of connection with China; for they need to know China as well as western science and institutions and methods. They need to be qualified and unselfish, then the five points of the compass assumed by the Chinese may be rightly adopted—for the north, east, south, and west will then be centered around the common pole of service to China, and from the Provinces to Peking and from Peking to the most distant Provinces the people will be united in an efficient, peaceful, and helpful State.

Because of the indemnities imposed on China from time to time as a result of the character of her reactions when foreign intercourse was forced upon her, and because of the consequent control of her customs revenue and of her salt tax, the returns from which are pledged for the discharge of these indemnities and for the repayment of foreign loans, China is not really independent but is subject to a measure of foreign control. The extraterritorial supervision of foreigners resident in China by their respective Governments instead of by the Chinese administration, which is not yet worthy of that confidence, and the condition under which railway concessions have been granted to foreign capitalists are two other aspects of China's international dependence.

The great need is for such a revision of these relations as to provide for cooperation rather than competition in such control. The open-door policy needs to be lived up to by all concerned. The map should be cleared of the present railway proposals which have often been obtained without due regard for the real industrial development of China and they should be replaced by a comprehensive scheme of railways for the whole country, determined purely from economic and engineering considerations and financed and developed under joint international auspices in close cooperation between the powers, including China herself, to whom after a period the roads should revert under proper condition.

The five urgent needs are: Cooperation (international and internal), capital, organization, native leaders, and regeneration of the people.

To all of these, but especially the last three, the development of education is fundamental.

Certain types of education demand special attention if China is to be prepared adequately to meet even her immediate needs. These are the departments of engineering, agriculture, and medicine.

ENGINEERING.

The ever-increasing outside demand for China's products makes it imperative that she be integrated industrially as well as politically, for only by responding adequately to this call of the time for industrial development can she retain even that measure of national independence which she still possesses and lay the foundation for ultimate complete independence.

Of primary importance in this connection is the more adequate development of better means of communication, railways, trolley lines, automobile roads, telegraph and telephone systems, etc.

This development of communications is not only fundamental to other industrial development but is of special urgency in China in order to permit the more rapid and adequate movement of food supplies, and so alleviate the famine conditions frequently arising as a result of floods. Furthermore, the development of the lines of easier transport of both goods and people will serve to unify the peoples and bind them together, whereas now it is exceedingly difficult for a sense of nationhood to be developed among a people so widely separated by rivers, mountains, and dialects, with no trunk lines connecting the north with the south or the east with the west. The existing railways are practically confined to the northeastern quarter of the country, and the total in the whole country is a little over 6,000 miles, whereas we are finding our 260,000 miles inadequate for a country of the same size.

It is essential that within China's own borders adequately equipped schools should be established in which the Chinese may be taught the arts and sciences necessary to the development and maintenance of such utilities.

Fundamental to railway and other industrial development is the exploitation of the mineral wealth of China, especially that in coal, il, and iron, as well as the ore deposits of other metals. Many "big statements" have been made as to the mineral wealth of China, but although several very general and inadequate observations have been published by foreign travelers qualified to judge, the fact is that this class of natural wealth in China has not been really surveyed. It is certainly true that whatever explorations may have been made, as undoubtedly several have been, under private foreign auspices and for private information, they have not come to public knowledge. There has been as yet no geological survey of Chinese dominions, and the Chinese themselves have never developed the art of mining to any great degree. There is urgent need of scientific investigation under China's own auspices of both the general geological structure and the specific commercial values. This indicates another class of education which is greatly needed by the Chinese. The actual reconnaissance would in great part furnish the means of such training in a working form. The intellectual processes which would be developed in this work are precisely those which the youth of China especially need as a corrective of the traditional neglect of the inductive method; and the intellectual and even ethical results of a thorough investigation of the natural resources of their land, even though inspired primarily by economic considerations, would, if carried out on broad and sound lines, be greater even than the industrial and commercial results.

Some attempt to meet the need of education in the various lines of engineering is being made at Peiyang University, the Government university at Peking, the Mining and Engineering College maintained in connection with the Peking-Mukden Railway at Tangshan three hours east of Tientsin, at the Government Institute of Technology at Shanghai, and in a less substantial way at Taiyuan in Shansi and at Chengtu in Szechwan. There is also the engineering department of Hongkong University, which, however, is strictly speaking not in China and can never affect the same result as an institution on Chinese soil and under Chinese control. None of these institutions are really adequately equipped or manned in comparison with the need for high-grade engineering education, nor are any of the mission colleges prepared as yet to render any adequate service in this connection.

AGRICULTURE.

The fundamental industry in China is agriculture, some two-thirds of the entire population being thus employed; and because the more complicated industries based on the mineral resources are so largely undeveloped and will be slower in their more adequate improvement, the resources of the soil are of special and more immediate importance. Perhaps the greatest opportunity for industrial improvement in China lies in this department. The methods and the very implements are said to be the same to-day as in 2700 B. C. The Chinese agriculturist is an expert intensive gardener, but knows little of extensive farming or of the improvement of plants and animals by selection and breeding. Moreover, the area under cultivation could be greatly increased. The use of the grass lands for cattle raising and the development of dairy products as well as a meat supply offer a tremendous opportunity.

With proper organization and administration along these lines of education and the development of communications, the land could readily support not only the present population with a greater margin of livelihood but would even produce raw materials and foodstuffs for export in much greater quantities than to-day.

The afforestation of China's hillsides is imperative; for at least one-sixth of the area of China proper that is the only hope. Besides the need for fuel and for building timber, there is the urgent matter of flood prevention by control of rainfall and run-off over these hilly and mountainous regions. While a forestry adviser (an American) is employed by the Central Government, it is a question whether his advice is adequately followed or whether he is given any opportunity to effect the sorely needed improvement.

Finally there is the great problem of conquering the desert lands. Perhaps a twentieth of China proper is so arid and sandy as to be put in the desert class, and there are besides the extensive deserts in the dependencies of Mongolia and Chinese Turkestan. In view of the need to overcome the great deserts of America, Australia, and Africa, as well as these in Asia, this problem of developing plants and methods that will aid in creeping out step by step upon the desert instead of allowing the desert to advance upon the present habitable areas is of great importance to mankind. To its solution the Chinese, if trained in scientific lines and imbued with the scientific spirit, will be no mean contributors.

All these considerations emphasize the need for agricultural education in China not only for China's benefit but also for that of the world at large.

The Central Government has undertaken the development of a School of Agriculture and Forestry in Peking, and a few of the Provinces have local experiment stations with some attempt at instruction. In two Provinces, Shantung and Szechwan, a large number of so-called agricultural schools are reported in the Educational Directory of 1918, no less than 67 and 17, respectively; but it is to be feared that these as well as the other 8 Government agricultural schools reported for other Provinces are of inadequate grade and attainment. The institutions under missionary auspices which lead in this work are the Nanking University and Canton Christian

College, where courses of collegiate grade both theoretical and practical are offered in the various phases of agricultural education. It is encouraging to note how popular these courses are. There is no limit to the opportunity for effective service in this department except that imposed by lack of funds.

MEDICINE.

Disease is rife throughout China and the death rate is probably higher than in any other country. The mental power and economic efficiency of the nation as a whole is thereby greatly lessened. The predominant diseases are tuberculosis, hookworm, and syphilis, while cholera and bubonic plague rage at times, the latter especially in the south. Famine is frequent in both north and south owing to devastation by floods or destruction by drought.

Unhygienic conditions are somewhat offset by the fact that uncooked food is rarely eaten and the customary drink is weak tea made with boiling water. A public health service is almost unknown and therefore smallpox, tuberculosis, and leprosy go practically unchecked. The outbreak and spread of bubonic plague in 1910–11, however, aroused the Government, and some measure of a preventive service has been established. The autopsies permitted during this epidemic led to the official authorization for autopsies and dissection throughout China beginning November, 1913; but full advantage of this new and important privilege can only be had gradually.

From very ancient times China has had her own practitioners of the healing art, and there is quite a volume of Chinese materia medica. Quinine, for instance, is well known and widely used, and inoculation for smallpox has long been practiced. There is a very thriving business to-day in patent medicines, among which, unfortunately, certain foreign concoctions predominate; and through some, sent in largely from Japan, the morphia habit is all too readily assuming the rôle formerly played by opium. There is no legal control of the practice of medicine in China. The Chinese old-style practitioner has no knowledge of surgery.

Private practitioners of western methods are for the most part confined to the treaty ports; among them are a few Americans or Europeans but more Japanese, mostly of inferior training. There are perhaps 60 or 70 Chinese modern physicians educated in Europe or America, but most of these work in hospitals or medical schools, not as practitioners. There are a few graduates from missionary medical schools who are now practicing, but there have been to date probably less than 160 such graduates and many of them are working in mission hospitals or medical schools. On the whole, then, outside the mission hospitals and outside the treaty ports there are very few practitioners in China who have had any training in western medicine and almost none who have been adequately trained.

The first hospital in China was established in Canton under American missionary auspices in 1835. The first Government hospital was inaugurated at Tientsin as late as 1904 under army auspices. The only hospital for the insane in all China is also in Canton and maintained by American missionaries. Although medical instruction began decades ago in an informal and inadequate way in connection with the mission hospitals, medical schools even under missionary auspices are of only recent development, mostly since 1908.

A dozen medical schools under Protestant missions, with a total foreign staff of 80 and a modern-trained Chinese staff of 30, look after some 600 students, of whom less than a hundred are women. Two-thirds of all the medical and also educational work in China under Protestant missionary auspices is conducted by Americans. Some 250 American physicians and 90 nurses, aided by 20 Chinese physicians (modern trained) and 400 assistants and 600 nurses, attend annually some 2,300,000 patients. The value of this medical work in removing prejudice can not be overstated, not to speak of its real humanitarian value as such, which appeals to the Chinese sufficiently to draw contributions of some $500,000 Chinese currency annually for the support of medical work under American auspices. The chief centers for this hospital and educational work are Mukden, Peking, Tsinan, Chengtu, Hankow, Changsha, Nanking, Hangchow, Shanghai, Foochow, and Canton. The foreign staff of a missionary medical school ranges from 4 to 14, the investment in plant from 10,000 to $210,000 each, and the annual cost of maintenance from $10,000 to $50,000. The number of graduates is small, totaling to date about 160; tuition is low, $100 Chinese currency, or less.

The Central Government maintains two medical schools, one in Peking and one in Tientsin in connection with the army. Provincial medical schools have been attempted at Tientsin, Wuchang, Nanchang, Soochow, and Canton, perhaps elsewhere also, but except at Tientsin they have not amounted to much. Except the Peiyang Medical School at Tientsin they are largely under Japanese influence. This Peiyang Medical School, which must be distinguished from the Peiyand Military Medical College also at Tientsin, gives probably the best medical instruction of any Government institution. It is the outgrowth of the work of Dr. John Kenneth McKenzie, of the London Missionary Society, whose skill attracted the attention of Li Hung Chang when he was Viceroy of Chihli. It is now officially recognized and supported as a Government institution. Recently it has had on its staff three French professors, supplied by the French Government. All instruction is in English.

In November, 1912, the ministry of education issued outlines and regulations for "special medical colleges." These are meant to correspond to the schools in Japan similarly designated; a four-years' course, for which the curricula must be approved by the Board of Education, though the school may be developed under private auspices. Such are being conducted at Nanchang, Wuchang and Canton where there are two, although one of them is largely inspired by and dependent on the efforts of two American physicians.

The total enrollment in these Government and special medical schools is about 700. All of them lack access to satisfactory hospitals for clinical instruction.

There could be no greater force for the regeneration of China than an adequate corps of well-trained Chinese women physicians inspired with high ideals of character and service. Yet there are but three institutions under missionary auspices, and but one under Chinese auspices where any attempt is made to provide women with medical education, and all of these are small, poorly equipped, understaffed and ill-prepared to train competent physicians. Of course, the girls of China lack as yet adequate preliminary education, but this condition is improving. There is of course great need for high grade nurses as well as physicians. Even from the existing schools, the oldest of which dates from 1900, there are but a hundred graduates all told, and most of them could not rank as independent practitioners.

Besides the missionary medical schools there are a few schools under foreign semigovernment auspices, inspired probably by motives of political policy. At Mukden, the Japanese have inaugurated a promising school with a staff of 20. At Tsingtau and at Shanghai, the Germans had begun the preliminary stages of modern medical schools when the war stopped their progress. At Canton the French conduct a hospital and medical school, with three physicians detached from the French Army; but it is entirely inadequate as a teaching institution.

No medical school in China is adequately equipped and none is adequately manned, though some include on their staff most excellent men who aim at high standards and are following sound policies. The whole aspect of this problem has been modified within the last few years by the entrance into the field of the China Medical Board of the Rockefeller Foundation, who have stimulated real progress by giving aid under proper conditions to a number of hospitals throughout the country, by affording opportunities for further training and research to a number of missionary physicians when on furlough and to a number of Chinese graduates in modern medicine, by assisting in the development of more adequate premedical courses at Changsha, Shanghai, and Foochow in connection with existing institutions, by strengthening greatly the medical school of Shangtung Christian University where the medium of instruction is Mandarin, and by the reorganization of the Union Medical College at Peking, where the medium of instruction is English. In connection with this last institution a premedical faculty has also been provided, and for the hospital and medical schools very extensive buildings are now in course of construction at a cost of several million dollars gold.

A large medical faculty is being provided and their work will without doubt greatly affect medical standards throughout the land in due course. But in view of the great need for adequately manned hospitals all over the land, and for qualified private practitioners, only the surface of the problem has been touched.

The China Medical Board proposes in due time to establish a similar plant and staff at Shanghai. South China, properly speaking, is still neglected, although the region of Canton is especially rich in clinical material of all sorts, particularly of certain tropical diseases. The medical school of Hongkong University which is not on Chinese soil, charges very high fees and does not have a whole-time faculty, but is manned almost entirely by physicians whose chief concern is their private practice. These reasons, especially in view of the natural attitude of the Cantonese toward an institution wholly under British control and on British soil, make it extremely desirable to develop in Canton a medical school of the highest grade under joint missionary and Chinese auspices. The time is ripe, if only adequate funds are made available. No greater opportunity for effective philanthropic investment can be found in China than now offers in connection with medical work at Canton where 90 years ago such work entered China, and yet where existing institutions to-day are not adequate to the situation.

IV. CAUSES OF BACKWARDNESS.

The fundamental element in the three types of education just discussed is, of course, natural science in its many branches, and this involves the realm of ideas most in contrast with the content of Chinese education of the old type. But even more fundamental than the difference in content is the difference in method and attitude, for it is here that the major causes of China's backwardness in science are discovered.

ABSENCE OF THE INDUCTIVE METHOD.

"Method" is the distinguishing characteristic of modern science, or more specifically "inductive method." This has been almost completely lacking among the Chinese, whose philosophers have preferred a priori deduction, and given greater weight to analogy.

Western teachers of Chinese students are constantly impressed with their readiness to argue by illustration and to accept a single illustration as proof; not that they consider that a single exception to a rule invalidates its generality, but that from a single case a general law can be deduced. This is well shown by the following reply which was made by a college freshman in his geometry examination to the question: "What is a locus?" the class having spent a due proportion of the term on loci problems. He was by no means an unskillful logician from the Chinese point of view, though he may have lacked geometrical perception. when he answered "A locus is a straight line all the points of which are equally distant from the two sides." For he was simply attempting to put in generalized form the first case of a locus which the class had studied, viz, that the perpendicular bisector of a straight line is the locus of all points (in the plane of the two lines) equally distant from the extremities of that line.

The method of the Chinese philosophers was a priori, and it seems that they adopted this course, not through ignorance of the experimental method, but from choice. The maxim of Confucius that "knowledge comes from the study of things" could not be more out of place than it is in his pages. The Chinese claim that their sage wrote a treatise on the experimental study of nature, but that it was lost; and thus they explain the backwardness of their country in experimental sciences.

Practical as the Chinese confessedly are, it is rather remarkable that in the study of nature their philosophers have made practically no use of the inductive method, though it appears that some of them at least had glimpses of its virtue as early as 500 years before Bacon. In the writings of the brothers Cheng there is the following question and answer:

One asked whether, to arrive at a knowledge of nature, it is necessary to investigate each particular object; or may not some one thing be seized upon from which the knowledge of many things may be derived.

The master replied: " A comprehensive knowledge of nature is not so easily acquired. You must examine one thing to-day and another thing to-morrow, and when you have accumulated a store of facts your knowledge will burst its shell and come forth into fuller light, connecting all the particulars by general laws."

We say they had glimpses of the virtue of the inductive method, for it is hardly to be asserted that a philosopher really appreciated a method which neither he nor his disciples practiced but merely spoke of once. Contrast with the quotation just given this saying of Chang, the second of the five great thinkers of the Sung dynasty:

"To know nature, you must first know Heaven. If you have pushed your science so far as to know Heaven, then you are at the source of all things. Knowing their evolution you can tell what ought to be, and what ought not to be, without waiting for anyone to inform you."

Between these two dicta we see the parting of the ways—one leading only to a maze of hazy unverified and unverifiable speculations, the other destined to bring any philosopher who followed it into the presence of valid generalizations based on observation; and we see the sages of China choosing the wrong pathway, vainly seeking a short cut to universal knowledge by following what they considered by the light of inner reasoning to be the order of nature, instead of laboriously studying one thing at a time in order to connect " all the particulars by general laws." Had her early thinkers taken the suggestion of the Chengs as their guiding star, China might to-day be the dean, instead of the most backward pupil in the school of science.

SPIRIT OF INACCURACY.

A spirit of inaccuracy or of indefiniteness, of being satisfied with very approximate statements, as well as with assumptions instead of proofs and of generalizing from a single case, is most prevalent and will only be dispelled by the spread of modern education. There is no more vexing factor in the life of a foreigner in China than the utter lack of accuracy among the Chinese in most matters involving numerical relations. The ordinary troubles that one has with careless and even dishonest workmen and contractors are enhanced manyfold by reason of the discrepancies between the various measures used for different purposes though called by the same name. The history of the method by which the units were adopted and fixed is lost in antiquity, and the variations in the measures now used destroy any claim that there ever was among them a true standard such as those recognized and employed by western peoples to-day. For instance, the chih or unit of length differs according to the province and the prefecture, the city and the ward, the craft and the usage. There are over 100 different values of the chih actually in use. Some of these are doubtless derived from ancient official chih, but the majority seem rather to be due to caprice of custom. The variations are by no means small, the extreme values differing on the average by more than 6 inches in a unit of approximately 14 inches. In some places the carpenter's foot rule is 11.14 inches long, whereas the mason's rule is as short as 10.9 inches, so that in a building 100 feet long, if this difference were not realized by the architect, and he furnished the same specifications in Chinese measure to masons and carpenters, the frame of the house would overhang the stone foundations by 2 feet. In most cloth shops there is one measuring rod to use in buying and another to use in selling; and it does not take a Solon to tell which is the shorter. The maker of measuring sticks or of balance rods keeps a stock of ungraduated blanks and will insert the brass points to suit the wishes of his customer. Nearly every householder has his own set for checking again against those of itinerant vendors of dry goods and foodstuffs.

The distance between two points A and B, according to Chinese representation, depends not merely on the geometrical factor, but on others that determine the relative facility of travel between these points. It is farther from A to B than from B to A if B is upstream from A on a river, or at a greater elevation on a hill road. It is farther between A and B at night or when raining than it is by day or when clear. While, of course, the practical philosophy of this way of regarding distance is evident, it still is true that such failure to separate these factors from the geometrical factor in the form of statement operates to retard appreciation of accurate statement and accurate thinking.

Paper may be sold by the hundred sheets; and yet by a desire to keep the stated cost per hundred uniform in spite of variations in quality, the dealer will "call" a less number of sheets a hundred sheets, so that when I requested my servant to buy a hundred sheets of a certain paper he returned with 80 and insisted that "in that kind of paper a hundred sheets are only 80."

The traditional unscientific and unquantitative attitude toward business was well illustrated in the founding of the Hanyang Iron Works, for Chang Chih-tung when he ordered from abroad the machinery for China's first modern iron works, not only did not know where he was going to locate the plant, but he did not know what type of ore it would have to handle, for no ore had been discovered. When he ordered the machinery he was stationed in Canton, and when it reached China he had been transferred to Wuchang, and it was pure good luck that ore suitable for the type of plant he had ordered was actually discovered below Hankow and a good coal mine found above.

Although a first impression of China and the Chinese may be that of deadening uniformity, it takes but a little closer observation to show that this is just the opposite of the truth. Along with the manifold divergencies in speech and customs, which play a paramount part in the life of the people, and which by a common saying do not run uniform for 10 li (3 miles) together, there is a like diversity in those standards of quantity upon the absolute invariability of which so much of the comfort of life and the entire advance of science in western land depends. So far from suffering any inconvenience in the existence of a double standard of any kind, the oriental seems keenly to enjoy it, and two kinds of weights, or two kinds of measures seem to him natural and normal, and modern education is only just beginning to open his eyes to the inherent objections.

The whole Chinese system of thinking is based on such a different line of assumptions from those to which we are accustomed, that they can ill comprehend the mania which seems to possess the occidental to ascertain everything with unerring accuracy. Curiously enough, concomitant with the early development of their system of weights and measures—a decimal system for the most part—the Chinese have become fixed in the habit of reckoning by tens, and frequently refuse to make a statement of number nearer to the truth than a multiple of 10. An old man is "70 or 80 years of age" when you know for a certainty that he was 70 only a year ago. A few people are "10 or 20," a "few tens," or perhaps "ever so many tens." The same vagueness runs in all their statements, and for greater accuracy than this the Chinese do not care, except when you are paying them money.

The first generation of Chinese chemists will probably lose "a few tens" of its number as a result of the process of mixing a "few tens of grains" of something with "several tens of grains" of something else, the consequence being an unanticipated explosion.

The Chinese are as capable of learning minute accuracy in all things as any nation ever was—nay, more so, for they are endowed with infinite patience, but the point here is that as at present constituted they are entirely free from the quality of accuracy and that they do not know what it means except as they come under modern education.

FIVE OTHER CAUSES.

Another cause of China's backwardness in modern science is to be found in the lack of mathematical knowledge, or the failure to apply it. Even though Chinese philosophers early made most remarkable independent advances, especially in algebra, the knowledge of mathematics is to-day very small among Chinese scholars except where they have recently been under foreign instruction.

The language difficulty has already been sufficiently outlined. The old system of education quenched the spirit of inquiry and neglected to include knowledge of science as a requirement for political preferment, which was the end of all education. The influence of astrologers, fortune tellers, and geomancers was reinforced by the official indifference regarding popular education so long as the Government felt that its own security depended somewhat upon the upholding of ancient superstitions and reverences, an attitude which fortunately has now seen its day even in China.

OUTLOOK.

A more widespread contact with translations of western books is slowly but surely bringing the reading Chinese into a fuller appreciation of western or more scientific thinking. Their increasing familiarity with the inventions and methods of the West is undermining their superstition, as is, also, the spread of Christian theology.

The changes in the method of instruction and the system of education are for the most part tending to develop a spirit of inquiry and an appreciation of the inductive method, which is beginning to yield due fruit. When the influence of returned students who have been adquately trained in western countries and that of the graduates from first-class mission and Government colleges becomes more potent, we may expect to see a much more rapid development of the educational system, but here again the magnitude of the undertaking and the difficulties as to efficient teaching force and adequate resources are such that only natives can achieve the ultimate solution. We teachers from abroad can hardly expect to do more than to give the impulse and to help in the preparation of the vanguard of such an advance.

When special and general education has proceeded far enough to provide the trained men needed to make the various adjustments involved in the tremendously complex renaissance of this nation and to have provided the background of an enlightened people, there will of a surety be found among Chinese students many who will desire to follow the torch of learning and of truth for its own sake, some of whom will attain a high degree of analytical power and experimental skill, for the Chinese after all are capable of exact and careful thought under right conditions, and moreover possess unusual patience and manual skill. The Chinese have a power of application and a capacity for detail that is destined to bring success in scientific inquiry when once they get the background, adopt the method, and make the start.

The irresistible progress destined to be made by western science among the Chinese will surely undermine their faith in the Book of Changes, which is at the base of Chinese philosophy. Whatever is permanently true will remain in imperishable blocks, but the structure as a whole will fall in ruins, with Chinese ideals pitilessly and irrevocably shattered. At this critical period of the disintegration of outworn forces, what new moral and spiritual ideas are to replace the old in order that the new state of these people may not be worse than the first?

Mere education in the science of the west, mere contact with western civilization, commerce, railways, telegraphs, mines, etc., can not be expected and are not calculated to regenerate China, because they have no direct moral or spiritual value, and the Chinese seem never to have been profoundly moved by other than moral and spiritual forces.

Education which deals only with coordinated physical or mental facts, conducted however thoroughly, does not prove adequate for the regulation of the conduct of mankind. It is so largely intellectual that it leaves man's highest nature unsatisfied and almost untouched; therefore, it is imperative in the present intellectual and material awakening that the more subtle forces which will profoundly affect the soul of the race should be fostered side by side with these others.

At the same time care must be taken to avoid repetition of the unwarranted conflict between science and religion. Our instruction must be such that these two departments are not regarded as antagonistic, but as supplementary, not only in affecting daily life and conduct, but supplementary, also, as revelations of the character and purposes of God. We must, also, avoid the tendency to impose a system which is the outgrowth of western civilization without due regard for the oriental character and mode of thinking.

Much of the prejudice against missionary work has doubtless been due to its connection in many instances with an irrational dogmatism which happily has been and is being largely eliminated by the broadening of education. Missionary education should be, and in several institutions already is, characterized by the broadest possible horizon, adapted to China's present situation, yet with distinct reference to her future welfare and that of the world as influenced by her; with the utmost care it looks to the moral development of the people, for such faults as the Chinese have can be eradicated by education in the broadest sense of that term. Both the strength and the weakness of China emphasize the necessity of bringing to bear upon the nation those influences which will align her on the side working for the higher development of the whole human race.

The wide diffusion of Christianity in its best form will not suddenly introduce the millennium into China, for all intermediate stages must be passed through before the goal is reached, but it will for the first time in Chinese history realize the motto of the ancient Tang repeated so impressively in more recent days by Chang Chi Tung: "Regenerate, regenerate the people.". Thus alone can the country be adapted to the altered conditions brought about by the impact of western thought. Christianity has been tried as yet upon a small scale only, but has already brought forth fruit after its kind. When it shall have been thoroughly tested and have had opportunity to develop its potentialities in a manner specially adapted to the situation, it will give to China intellectually, morally, and spiritually the long-sought for elixir of a new life.

CONTRADICTORY CHARACTERISTICS.

In reviewing the faults and virtues of this remarkable people, one realizes that they possess or exhibit strangely contradictory characteristics, at least contradictory as we of the west view them, though I am mindful that often the oriental, especially the Chinese, sees no contradiction between ideas or ideals which we may consider mutually exclusive.

Ingenious in small things, they rarely carry their inventions in any direction to its natural sequel. Responsible for some of the best of early achievements in applied arts, they have made no great inventions in recent centuries.

As a nation they present the greatest example of persistence, while as individuals they are often singularly lacking in this quality. They show great economy in use of materials, but are very wasteful of time and energy. They build but do not repair.

Kind-hearted and in general considerate of animals in deference to Buddhistic teachings, allowing even snakes to live, they let men die of starvation by the roadside and seldom make heroic efforts to save endangered lives; in hard times the lower classes even sell their children to be slaves.

So drilled in usage of the past, they continue in old ways even when the reason for that way has long since ceased. So conscious of their obligation to the past, they are comparatively indifferent to the claims of the community in which they themselves are living and have little idea of passing on to the future with interest what they have received from the past. They spend vast sums in reverence to ancestors, but destroy the forests that would safeguard their own descendants. They practice early marriage and polygamy for the sake of progeny, and yet impoverish their posterity. The nation which of all now extant has shown the greatest power of persistence, has nevertheless made the least provision for its own future.

This outstanding result of ancestor worship and the all-pervading practice of "squeeze" are the two paramount evils of Chinese life. Serious as these faults are and slow in their removal, they can be overcome by a type of education that will develop the scientific spirit, higher moral ideas, especially a regard for the community and the future, and greater strength of character; in short, the highest type of modern education which while training the student for effective service will also spiritualize his motives in life. This is, indeed, the high aim many of our American missionary colleges are fulfilling to the extent of their ability.

A. GOVERNMENT INSTITUTE OF TECHNOLOGY, SHANGHAI.

B. MODERN NORMAL SCHOOL ON SITE OF ANCIENT EXAMINATION HALLS, CANTON.

A. Students of college grade.

B. Girls of the secondary school.

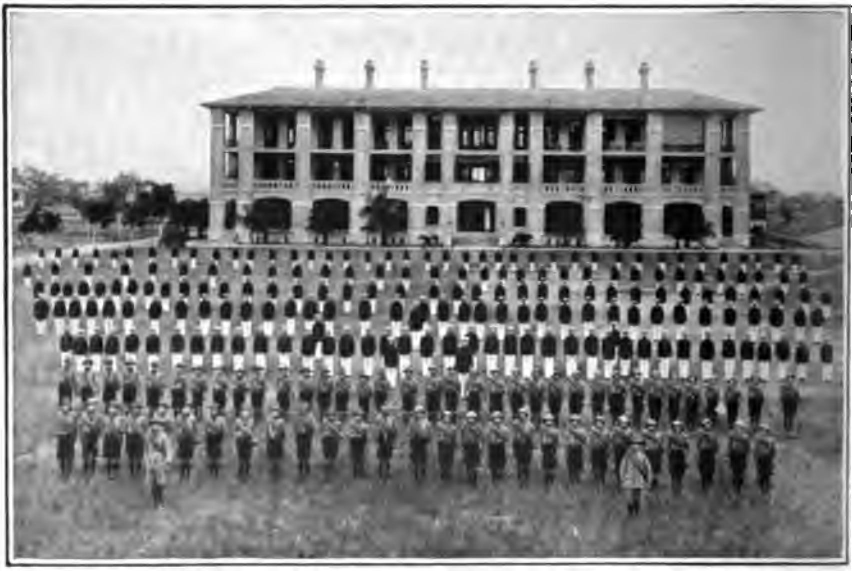
CANTON CHRISTIAN COLLEGE.

A. Panorama from the river.

B. Grant Hall.

CANTON CHRISTIAN COLLEGE.

A. Class in animal husbandry.



B. Secondary school students before Martin Hall.

CANTON CHRISTIAN COLLEGE.

V. MISSION SCHOOLS.

THE OPPORTUNITY TO SERVE CHINA.

Although the first modern schools in China were begun under mission auspices and some of the best educational institutions to-day are under mission auspices, the education of the Chinese is not the problem of the mission boards; it is China's own problem. But in view of the immensity of the Government's task, the missions have an unprecedented opportunity to render a real service to China. In view of the disturbed political conditions ever since the revolution of 1911, the governmental effort at providing general education has, with a few exceptions, been very ineffective. The mission schools have even a greater opportunity to-day to help mold the educational system of China than was even thought possible in 1911 when such a new spurt was taken under the First Republic in educational matters, the most marked since the eventful day in 1905 when a stroke of the Imperial pen abolished the old system of literary examinations and called for the establishment of modern schools throughout the land.

As already indicated, the great handicaps in the Government's educational work are the lack of funds, the lack of qualified teachers, and the lack of honest and progressive administrators. An adequate appreciation of the function of education and the precise adjustment of the type attempted to the needs of the community and of the nation are also still to be achieved. It is for these reasons that mission institutions have had and are still to have a very great share in shaping the course of China's educational development.

After several decades of diffused and experimental service, which, however, has been of great value and was even a necessary preliminary, the Protestant missions are aiming to furnish China with a thoroughly standardized and coordinated system of Christian education, emphasizing quality rather than quantity, so as to provide educated leadership in the various professions and vocations, and an intelligent and reasonably educated church membership and trustworthy citizenship who will constructively influence their community life. This is serving as a challenge and a corrective to the national schools of similar grade.

PROGRESS OF MISSIONARY OCCUPATION.

Missionary occupation of China may be regarded as covering six stages: From 1807 to 1860 it was confined to the coast, mostly the southern half of the coast, the beginning having been made at Canton.

From 1861 to 1877 the eastern third of the country was more or less generally covered. From 1878 to 1890 the missionaries were pretty generally distributed, except in Hunan, Kweichow, and Kwangsi. During 1871 to 1900 the occupation became quite general, though, of course, with considerable variations. From 1901 to 1910 the increase was most marked in the middle third of the country divided longitudinally. From 1911 to 1917 there has been a movement of concentration to fewer centers farly evenly distributed, except in the far corners northwest and southwest.[1]

STATISTICS OF MISSION SCHOOLS.

Out of a total of 6,000 Protestant missionaries, some 4,800 are Americans, and of these some 1,500 are engaged in educational work, which includes two-thirds of all the educational work at present under way in China under Protestant auspices. Unfortunately the statistics of Catholic work are not available, though there are many French, German, and Belgian Catholic missions, and a few American priests who work under one or the other of these missions. Generally speaking, the Catholic missions are not so ambitious from a purely educational point of view, though they are fairly strong on industrial work connected with the production of church fixtures and furnishings, and some of the best scientific work ever done in China, both in former and in recent years, has been under French Catholic auspices.

Protestant missions in China, besides their medical work, conducted in 1917–18 115 kindergartens; 5,276 lower elementary schools; 575 higher elementary; 233 middle or high schools; 28 colleges; 156 normal and training schools; 31 theological schools; 40 industrial schools, and 49 orphanages—a total of 1,227 institutions, with a teaching force of 1,471 foreigners (831 of them women) and 9,595 Chinese (2,783 of them women), and a total enrollment of 170,659 students (54,461 of them girls) distributed as follows: 3,196 kindergarten; 133,826 in lower elementary; 19,605 in higher elementary; 12,533 in middle school; 1,499 in college; 1,409 in industrial; 985 theological; and 1,544 in orphanages.

The proportion of female students is highest in the elementary grades where they are about one to two, and in the normal school where they outnumber the males nearly two to one. But in middle schools the ratio is 1 girl to 5 boys, while in actual college grades the ratio is 1 to 22. There is as yet no institution under Government auspices where a girl can get instruction of collegiate grade, and only three, probably two, of really collegiate grade under mission auspices.

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[1] As a force working for the modernization of China, though not always in a manner most to be desired, we should mention also the many foreign merchants and consular and diplomatic officers, who, however, are practically confined to the 50-odd treaty ports. There are probably 150,000 Japanese, or more than all the other foreigners taken together. Next are the Russians, who number perhaps 50,000, whereas 10,000 will probably cover the British (not counting Hongkong), and 8,000 will cover the Americans, who have greatly increased in recent years, while of French and of Germans (until the war unsettled everything) there would likely be some 4,000 each, with perhaps less than 5,000 of other foreign nationalities combined.

While complete data are not available, it seems likely that these ratios between female and male students would probably hold good, roughly speaking, for Government schools as well as missionary.

THE SYSTEM OF CHRISTIAN EDUCATION.

The system of Christian education, ranging from kindergarten to university, is widely spread throughout the country, and culminates in the strategic centers to be mentioned presently. There are nine local Christian educational associations covering from one to three provinces each, and in turn affiliated with the Christian Educational Association of China with headquarters in Shanghai.

A relatively small portion of the population of China is found in the cities. Nine-tenths of the population live in the country or in relatively small aggregates, some in isolated homes, but generally clustered in hamlets and villages. These afford a smaller working unit than is usual in many other countries, and are the natural basis upon which to start in the education of the common people of China, whereas the training of the leaders for that more general educational conquest can best be done near the largest cities.

Although the great bulk of missionary education is still in the elementary and secondary grades, in more recent time a number of schools of college grade have been developed, nine even assuming the title of university, though the validity of such a claim may be questioned.

The strategic points at which mission colleges are located and Government institutions also are concentrated are as follows:

From south to north through the eastern provinces, Canton, Foochow, Shanghai, and the neighboring cities of Hangchow, Soochow, and Nanking (all of which are connected with Shanghai by rail), Tsinan, Tientsin, and Peking. Up the Yangtsze 650 miles is the educational center of Wuchang and Hankow, which is the Chicago and Pittsburgh of China combined, being the intersection of the main trunk lines of traffic, and is the center of a great coal and iron region. South from Hankow is situated Changsha, the capital of Hunan Province, the last to be open to foreign influence, and here Yale maintains an educational and medical mission. In the far west at Chengtu, the capital of the great province of Szechwan, there is the beginning of a college which has one of the brightest prospects in all China.

Of 26 colleges, in some of which the bulk of the work is still of high-school grade, 10 are maintained as "union" institutions by several denominational boards cooperating, while two are strictly nonsectarian though Christian. These are Yali or the College of Yale at Changsha, the capital of the last province to be opened to foreigners, and Canton Christian College, which may in a way be regarded as an intercollegiate mission, since eight American institutions maintain each a representative on the faculty of this school in distant China as a part of the foreign work of their Student Christian Association or other special organization.[1] Curiously enough, both of these institutions have had a remarkable degree of financial support from the Chinese; in the case of Yali this has taken the form of a definite cooperative basis, while at Canton money, both for building and for running expenses, has been turned over unconditionally to the trustees of the college incorporated in New York.

Since the most striking features of the recent development of modern education in China under Christian auspices are nearly all well illustrated in the case of Canton Christian College, and are naturally better known to us in detail, we shall present a brief account of this institution as an example.

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[1] These are: University of Pennsylvania, Pennsylvania State College, Teachers College of Columbia University, Vassar College, Williams College, University of Pittsburgh, Kansas State Agricultural College, and Washington and Lee University.

APPENDIX A.

CANTON CHRISTIAN COLLEGE.

The history of the Canton Christian College falls naturally into three periods: Inception, 1884–1903; organization, 1904–1918; and realization, 1919 and beyond.

The embryonic stage began with the conception in 1884 on the part of two far-sighted members of the American Presbyterian Mission at Canton (Rev. B. C. Henry and Dr. A. P. Happer), that there should be established under Christian auspices a college of high standard to serve South China. In 1885, Dr. Happer raised in America an initial fund of approximately $100,000, a very large sum in those days for higher education in China.

On his return to Canton Dr. Happer received a remarkable petition signed by no less than 400 Chinese, including prominent officials, scholars, gentry, and merchants of Kwangtung Province, urging that the project be carried forward as rapidly as possible, so as to satisfy a long-felt want.

The trustees were incorporated as of "The Christian College in China," under the regents of the University of the State of New York in 1893 and for a time owned the property and carried on the boys' school of the Presbyterian Mission at Canton, pending decision as to the permanent location of the proposed higher institution. In response to a petition in 1898 signed by 54 pastors, licentiates, teachers, and elders of all denominations in and near Canton urging that the college be maintained in Canton to serve the church as a whole, the trustees finally determined to secure a permanent site in the vicinity of this ancient "City of Rams," the largest non-Christian city in the world. In 1899 a separate school was started on a wholly undenominational basis which was moved to Macao during the Boxer disturbances and remained there four years while the small rice fields, bamboo groves, ponds, and innumerable grave plots near Canton on which the college could be built, were gradually acquired.

The period of organization began with the occupation in 1904 of the present site on the north shore of the island of Honam, 2½ miles east of the center of Canton City, the metropolis of Kwangtung Province which is 90 miles from Hongkong, one of the great ports of the world. In anticipation of this fixing of site, the corporate name had been amended in 1903 to be "Canton Christian College."

Perhaps the most striking feature of the institution since 1904 has been the rapidity of its growth. The campus has increased from 20 acres to over 130; the two long wooden bungalows, which provided temporary shelter for the whole institution in the first years, are now supplemented not only by a score of other temporary buildings, many of which are of brick, but by 27 permanent fire-resisting and ant-proof buildings, with 3 more in course of construction today. The student body has grown from 60 to 600 and the staff from 6 Americans and 6 Chinese to 31 Americans, 2 British, and 51 Chinese (not counting wives who do not teach). The budget of current expenses has risen from $20,000 Hongkong currency to over $200,000 annually. Only one element has failed to grow, the all-important item of endowment; there was none in 1904 and there is practically none in 1919.

Half of the budget for current expenses is met by student fees and rentals; the remainder must be secured each year from generous individuals or supporting groups, Chinese or American. The investment at the college to date is about as follows: Grounds $80,000, buildings $350,000, equipment $35,000, or a total of $465,000 United States currency. The rapid growth and this substantial investment make even more urgent the securing of an adequate endowment

A most encouraging feature of this period has been the cooperation of the Chinese. Of the 30 permanent buildings, 10 have been given by Chinese, while during the past seven years as much money for all purposes, current expenses, as well as buildings, has been received from Chinese sources (including tuition fees) as from America. Twice since the Great War unbalanced everything and American contributions to the college have fallen to half their former rate, the students have voluntarily and enthusiastically conducted local campaigns and in 10 days' time collected individual subscriptions of small sums, which totaled $17,000 Hongkong currency in 1915, and $22,000 in 1918, to be applied to current expenses. Without these student campaigns the institution could not have met its obligations. But such efforts can not be relied upon too often, and from American friends more adequate help should come in behalf of students who thus have proved their worth. When in the early summer of 1918 a chapter of the American Red Cross was formed in Canton, every student and every Chinese instructor in the Canton Christian College became a paying member of the American Red Cross.

Besides organizations of former students in Canton, Hongkong, Saigon, and Peking, the Canton Christian College Club of North America includes some 75 alert members. These groups have done much in securing friends for the college as well as by contributions in money.

Chapters of a general association of Chinese friends and supporters have been established in China and in 36 cities of North America, including such centers as San Francisco, Chicago, Philadelphia, New York, Boston, Montreal, Toronto, Winnipeg, and Vancouver. In the year 1916–17 the membership fees of this Chinese association in North America amounted to $6,400, and were applied to the current expenses of the college.

A third noteworthy characteristic of this period of organization is that the institution was practically forced to become coeducational, as it now is in all grades. While continuing to have girls as well as boys in the elementary school and to keep the secondary school open for girls who prefer this type of institution, it is now proposed to refrain from developing a separate secondary school for girls, and to back the True Light Middle School for girls, already fairly well developed under the auspices of the American Presbyterian Mission, on the condition that they offer adequate preparation for entrance to our College of Arts and Sciences, and direct girls desiring to pursue collegiate studies to the Canton Christian College. As the number of women increases, courses especially adapted to their needs will be developed and in due course a separate college for women established, although for some time the numbers will be far too small to warrant such a step. At present there are about 40 girl students in the whole institution, of whom only one is in the college proper, though in previous years six other girls have been regular students in this department. Experience in the secondary grades has shown that the girls are very close competitors of the boys in point of scholarship.

In accordance with Dr. Happer's original intention and for the reasons set forth in the earlier section of this article on the language problem, English is the medium of instruction for all modern subjects beyond the second year of the secondary school. At the same time a high standard in Chinese subjects is maintained and all students are required to study Mandarin, which is also employed as the medium of instruction for some of the courses, such as the geography and the history of China.

Three elements of modern education are so entirely novel in comparison with the old-style education in China and are of such recognized importance to-day that a brief mention will suffice to indicate the special emphasis they receive in Canton Christian College, as indeed in all progressive schools in China. The natural sciences, manual training, and athletics.

We have already spoken of the relation of the courses in the various departments of natural science to China's need for leaders in industrial and hygienic reformation. The details of such work at Canton Christian College are set forth in a later section of this article.

In endeavoring to introduce and develop interest in manual training, it has been necessary to proceed wisely, in view of the traditional antipathy toward any sort of manual toil on the part of the scholar class. But that the movement has been crowned with abundant success is evident from the spirit exhibited by our students in digging a large outdoor swimming pool two years ago and grading their own athletic field in the past year, both tremendous undertakings involving daily participation in dirty work which covered more than a year in each case. Rich and poor, girls as well as boys, old-style teachers as well as returned students from America. all joined in the work. This really remarkable result was not suddenly attained but was the culmination of a sequence of graded steps calculated to overcome traditional prejudice. And in all of this, cooperation or example on the part of the American instructors has been a leading factor; indeed, in the digging of the pool some of the American women of the campus took active part.

Outdoor games were, of course, introduced at the very inauguration of the institution and naturally the long finger nails and the long gown were not long in coming off when once the wearer actively participated in a game of association football. That was the first step; other athletic forms were readily developed and the total effect of such in opening the mind as well as the pores has been of untold value.

In the line of manual training more properly speaking, advantage was taken of the traditional reverence for the written and printed "character" and elementary practice in typesetting and printing was introduced as the thin edge of the wedge, which in due course was followed by required work in carpentry, basket and rattan work, and then later in gardening—all this, of course, in the secondary school. While in the college proper nearly the whole time assigned to science courses is spent in laboratory and field work.

Somewhat related to the same principle underlying this athletic and manual work is that involved in military drill. Not only is the discipline of the secondary school conducted on a miltiary basis but military as well as physical drill is required. In the College of Arts and Sciences there is no required military drill, but a vigorous volunteer corps has been formed entirely on the students' own initiative.

As already indicated the college is nondenominational. The doors are open to all students qualified by character and scholastic attainment to enter, irrespective of religious belief. Great care is taken to make the atmosphere of the campus wholesome and tolerant. Religious instruction is an integral part of the curriculum in all grades and weekly preaching services as well as daily chapel exercises are held under the auspices of the institution, but there is no organized church at the college. Though at first regarded by many denominational missionaries as a very doubtful experiment the Canton Christian College while maintaining high educational standards and observing a strictly nonsectarian attitude has nevertheless fully justified its existence even as an evangelizing agency, for every year several scores of students make public profession of Christian faith under circumstances that indicate their grasp of the fundamentals of a tolerant and effective Christianity. Though very few are Christians when they enter or come from Christian homes, 90 per cent of all students who go out from the college after two or more years attendance are church members. In this connection it is noteworthy that when information about the different churches is publicly given by Chinese Christian teachers, denominational differences are barely mentioned, while in every case the need for workers is emphasized and the weakest church makes the strongest appeal to the new converts.

The college offers a standing invitation to any denominational board having work in Kwangtung or Kwangsi to participate in the work of higher education by contributing a man to the staff, and in consequence to have the privilege of nominating a member of the board of trustees. The London Missionary Society has already entered into this arrangement, and doubtless their example will in due course be followed by others, since the college aims to serve them all as the apex of the system of Christian education in South China.

While this nondenominational basis receives indorsement from many Americans as well as from the Chinese generally, financial support from organized denominational sources is thereby reduced, and the college has been obliged to build up also an American constituency of its own corresponding to the general association of Chinese supporters, though without any fees or dues. Thus far this general association of American friends of the college has been actively promoted chiefly by a central committee of women in and about New York City. There is still great need to secure a larger body of American friends who will support the college on a nonsectarian basis. (Reference has already been made to support from American colleges.)

Three problems of organization, which have been substantially solved, are perhaps worthy of special note: The architectural general plan, the administrative function, and the scholastic divisions.

THE ARCHITECTURAL PROBLEM.

In designing the grounds and the disposition of the college buildings upon them the inevitable expansion into a great university has been foreseen and considered from the very first in a large, orderly, and comprehensive plan, according to which all of the buildings are and will be successively fitted in their appropriate groups as they are erected. However, this scheme has not been taken as absolutely rigid, but has always been subject to restudy for a given area whenever a new group of buildings has been inaugurated. For adequate control of such an elastic scheme as well as for the design of the individual buildings the college maintains a resident architect. It has also organized its own building department, and thus greatly reduced the cost which rarely exceeds half, and in some cases is only a third, of the cost of similar buildings in America.

The purchase of a considerable stretch of waterfront has prevented too close encroachment by manufacturing plants and provided rich bottom lands for experiments in flooded fields cultivation and dikes that do extra duty as lichee orchards. Since communication with the city is had by means of a motor launch and small native craft, a granite wall and pier are provided as an outer landing harbor, from which a canal runs in a short distance to form an inner harbor for protection of the boats from typhoons and also to give access to the terminus of a narrow-gauge railway by which building materials, fuel, etc., are transported to various parts of the campus. To one side of this canal, where it makes a great bend, lies the swimming pool, designed to be filled and emptied by tidal action, assisted by a small centrifugal pump. Further in and somewhat more elevated will be the filter beds for the permanent water-supply system of the campus, at present only partially developed.

An open esplanade 200 feet wide leads from the river a quarter of a mile southward to the site of the future chapel. South of this is the impressive Students' Christian Association Building, which seats over 800, and yet is often crowded. The summit of the highest hill on the east, some 70 feet above the river, is reserved for the library, from which a wide cross esplanade extends westward as the axis of the main academic group. On the northern or riverward brow of this hill will some day stand a hall of international good will as a memorial to John Hay and other American friends of China. Disposed on either side of the great cross formed by these two esplanades are projected groups of buildings corresponding to the scholastic divisions of the institution. To the east and south of this more formal development lies an extensive residence park for the faculty, Chinese and American. A model village of modest cottages for subordinate employees has already been begun and, of course, athletic fields and gardens form other elements in the ground plan. There is also a fully equipped meteorological station so placed on the campus that students and visitors may by inspection, without seriously interfering with the actual securing of reliable records, form some idea of the character and value of such work.

Assuming the value to the Chinese students and people of an environment of scholarly and dignified architecture, in contrast with the prevalent nondescript adaptions of ill-assorted European styles, it is the aim of the designers to give the buildings individual distinction while subordnating them to the general unity of the scheme.

The type of permanent building adopted combines modern construction with a Chinese aspect, chiefly expressed in the roofs which are of green glazed tile and ornamented and curved according to the best native style. The floors are reinforced concrete, the walls of red brick of a pleasing soft tone. All the buildings are equipped with modern plumbing. It is distinctly the aim of the college so to build as to exemplify structurally and artistically the best combination of Western and Chinese architecture, and thus as well as in other ways to be of help in this period of change in China.

THE ADMINISTRATIVE PROBLEM.

The work of the institution is carried on under the direction of a council composed of the president, vice-president for Chinese affairs, bursar, and the head of each constituent school, except the elementary school, whose interests are represented in the council by the principal of the secondary school. When the faculty of any constituent school exceeds eight professors and associate professors it has an additional representative in the council.

The council is responsible for the drawing up of the budget for approval by the trustees, and is charged with all affairs that concern more than one school and with the inauguration or elimination of departments or schools. The plan of organization is that of an American university with lower feeding schools. All academic questions are dealt with directly by the faculty of each school, the head of each school having veto power over the action of his faculty.

The bursar performs also the duties of a general business manager and superintendent of buildings and grounds. Special officers of administration besides the resident architect are the resident engineer, the college physician, and the supervisor of religious work.

Since the trustees are in New York and the college in Canton, there is an unavoidable element in the major problems of administration, unknown in an institution in America, which may well be called the "Ten Thousand Mile Difficulty." This could only be solved perfectly by a president able to perform the miracle of being in two places at the same time, and is only moderately overcome by frequent visits from one side of the world to the other. Another line of solution of this difficulty has been steadily to increase the responsibilities and powers of the council on the field by delegation to it of many functions generally performed in more or less detail by the board of trustees for a college in America.

THE SCHOLASTIC DIVISIONS.

The scholastic work of the institution is divided into three main schools of five years each: Elementary, secondary, and collegiate. Some 1,100 students have entered the institution since 1899.

The elementary school is maintained partly as a model and observational school in connection with the Teachers' College which is being developed as one of the main divisions of collegiate grade. This elementary school is housed on the "cottage system;" that is, each class has its own cottage, which includes the class room, a dining room, pantry and servants' room on the ground floor, and on the second floor bedrooms and bathrooms for 30 students and two teachers, so arranged that the teachers, to reach their individual rooms must traverse the large bedroom of the students and to reach their private bath must traverse the bathroom of the students, thus enforcing at least a modicum of all desirable supervision.

A central building of the elementary group provides office space, assembly hall, a demonstration class and playroom, and a kitchen (in the third story), from which food is distributed to the individual cottages. This school is taught entirely by Chinese instructors. The principal is assisted by two other men and seven women with normal school training.

At present only four of the five cottages have been provided and so the enrollment is 120, whereas the full complement is intended to be 150, which will be the permanent limit. The cottages have each cost but $3,000 (United States currency).

The secondary school as at present organized covers the work of the highest two grammar grades and the first three years of the middle school. The enrollment in 1917–18 was 330, making it by far the largest administrative division, occupying three large dormitories. These dormitories have all been provided by Chinese donors, at an average cost of about $33,000 (Hongkong currency) for a fireproof building housing some hundred students (four in a room), and three to six unmarried instructors.

The present faculty of the secondary school includes 10 American and 25 Chinese teachers, 10 of the latter being graduates of American colleges. The curriculum is carefully planned to meet the practical needs of Chinese youth for active life and citizenship, the ideal of service being constantly set before them. Outdoor work of many sorts is emphasized, including observation trips to factories and places of interest and camping expeditions in association with teachers. Class sections are limited to 30 students and a system of class advisors is effectively maintained. Student organizations are encouraged.

The annual fees in the secondary school are about $300, and in the college about $250 (Hongkong currency), including room rent and table board as well as tuition.

An employment office helps students to find work on the compound for partial self-support, and there are a few endowed scholarships which cover tuition only. Boys entirely dependent upon a Christian pastor or other Christian worker are given free tuition. Tuition has recently been increased 50 per cent throughout the institution without affecting the enrollment. But it has, of course, been necessary as far as possible to grant scholarship aid to all students who urgently need it, giving due weight to diligence and nonscholastic activities and character as well as scholarship. All such aid is treated as a loan repayable in part or in whole by fulfilling certain conditions of service after leaving school.

The educational work of the missions in Kwangtung, especially of those which center at Canton, has for generations lagged behind their distinctly evangelistic work, and the number of boys' schools under Christian control is still lamentably small though the recent progress made in two or three of these has been very marked. These schools have hitherto been able to attract very few students from the upper middle class, and as a consequence those who have come have been financially unable to go into higher schools. Due to these circumstances, as well as to help in raising standards, the Canton Christian College has been compelled to establish a secondary school as a foundation of its own upon which to base college work. Meantime more than a hundred of its graduates have entered American universities and not a few have gone to the best technical schools in North China. As the prospect of larger numbers of students coming from other mission schools is growing brighter, it is now possible to count upon a sufficient number of applicants from our own secondary school to warrant emphasizing from now on the adequate development of the college proper and the bending of every effort in the direction of increasing its staff and equipment. Though for many years it will be necessary to maintain and enlarge the secondary school, say, to a limit of 1,000 pupils, the institution is already beginning to fulfill its true function in South China, namely, to offer courses of recognized college grade which will prepare men and women to be high minded and efficient leaders of their people without going abroad for study.

THE PERIOD OF REALIZATION.

Though for purposes of statistical statement we have given 1919 as the beginning of the period of realization as contrasted with the period of organization, this last stage really began in 1914 when the class, which in June, 1918, received the first degrees to be granted by Canton Christian College, entered the courses of study organized under the faculty of the College of Arts and Sciences.

The growth of the student body in the College of Arts and Sciences is shown by the enrollment statistics: 1912–13, 16; 1913–14, 27; 1914–15, 37; 1915–16, 43; 1916–17, 52; 1917–18, 103; 1918–19, 121.

These figures include the subfreshman class which though corresponding to the fourth year of the middle school is for administrative purposes placed under the faculty of the college proper. This is done not only to give greater momentum to that department during the early stages of development, but also to allow students in this year to elect courses in education, agriculture, and business, so that if unable to remain for the full college course, they may by the end of the freshman year be entitled to receive a junior certificate.

The present teaching staff of the College of Arts and Sciences totals 30, of whom 14 are of the rank of professor or associate professor. The B. A. degree is granted on the authority of the regents of the University of the State of New York at the completion of the four-year course in one of the following groups: General arts, natural science, social science, or agriculture. For each group certain essential subjects are required in addition to which a choice may be made among a limited number of others. Chinese composition and translation and eight credits in courses in religion are prescribed for all students. For graduation one must obtain 140 credits, each representing one semester-hour of recitation.

The arts course aims to fit men for teaching, especially English, and to lay a broad foundation for subsequent professional studies for the ministry, journalism, law, etc. Chinese and English language and literature and education are stressed, but it is required that even those taking this group shall become familiar with one of the sciences, chemistry, physics or biology.

The natural-science group puts the emphasis upon a more extended study of at least two of these sciences and upon mathematics, that graduates may be prepared to teach these subjects or to go on to specialized studies in medicine, engineering, etc.

The social-science group approaches the arts group, but requires more economics, sociology, and history with options in business and in government, and courses of obvious practical usefulness, which furnish an excellent foundation for men who will have to carry large business responsibilities, as well as those who will lead in social, economic, and political reform.

Agriculture is at present the most specialized collegiate course, and in view of the great importance of such work, as indicated in an earlier section of this article, it is very encouraging to note how popular the courses in agriculture are, practicaly half of the present student body of the college being in this department.

The special staff in agriculture includes, besides the head of the biological department as entomologist, two Americans experienced in horticulture and animal husbandry, one Chinese educated in America as agronomist, and several experienced Chinese agriculturalists secured locally. Twenty-five acres are under special cultivation, including rice fields, foreign and Chinese vegetable gardens, fruit-tree nurseries, etc. Among the special projects at present under way and of great importance to the future agricultural development of South China may be mentioned hog breeding; development of dairy herd; improvement of rice culture by selection; a study of the diseases of the lychee and also of the citrus fruits, of great importance to California and Florida as well as China; improvement of sericulture through the production of disease-free silkworms; a herbarium which exchanges with museums throughout the world. In all this work close cooperation has been established with the United States Department of Agriculture, the Philippine Bureau of Science, the International Committee for the Improvement of Sericulture, and the Kwangtung Experiment Station.

A medical school and a teachers' college are also being developed and a school of engineering is projected.

EARLIER EMPHASIS ON HIGH SCHOOL A NECESSARY PRELIMINARY.

The peculiar problem just now is really to " turn the corner " in the development of a high-grade college of arts and sciences as the first step toward the establishment of the future Canton Christian University, which will include these various schools.

When 20 years ago the effort to establish a full-fledged college was begun, it at once became evident that the development of a high-grade secondary school had first to be accomplished, and when the task was fully under way it became necessary to develop grammar grades.

The next lower stage was undertaken as the result of a bit of "spontaneous combustion" on the part of the upper classmen in the middle school, who in connection with their study of educational problems became so aroused to the need of more and better elementary schools, that they induced the Student Christian Association to undertake the development of an elementary school, which for three years they manned and financed completely, the college merely granting use of available space in one of the earliest temporary buildings. So rapidly did this school prove its worth that Chinese friends readily gave it the first two permanent cottages and a central hall, and the undertaking was transferred to the official control and sponsorship of the college as a part of its scheme for a complete educational system.

Freshmen classes and even sophomore classes were frequently conducted after 1903, though each year so many students, on leaving the middle school, went to America under Government aid, that it was always a question on opening a new academic year whether to devote available forces to carrying a handful of men through a year of the college course or with the same resources take in and adequately care for 40 or 80 students in the lower years of the high school.

The decision was almost always in favor of the latter course, for, besides the financial advantage, the development of a sufficient momentum in the high school was an essential preliminary to the establishing of a college. This momentum was also effectively increased by the maneuver of cutting the freshmen class off from the college course and adding it to the top of the middle school, making the latter a very substantial five-year course. After a decade of emphasis on the middle school it became possible to organize substantial courses of real collegiate grade, and students have been attracted by the prospect of obtaining a degree of recognized standard without the greater expense of studying abroad. In 1916 the fifth year of the middle school was returned to the control of the faculty of arts and sciences, and the fourth year was allowed to follow it as the so-called "subfreshman" year, already explained.

THE COLLEGE NOW FULLY UNDER WAY.

The task of developing a true college in close juxtaposition to an overshadowing high school is extremely difficult; especially when as yet sufficient dormitories are not available to permit a complete separation in the housing of college students away from high-school students, and no recitation hall or laboratory building is available for the exclusive use of college classes. Under these circumstances the results already achieved as regards both standards and scholarship and college spirit are most remarkable and warrant the claim that given the needed facilities, the development in the next decade will surpass all limits, for there is no possibility of overstating the desire of the youth of China for modern education of a high grade even under foreign and even Christian auspices. At the Canton Christian College even the attics of the dormitories are filled with students (and that in a tropical climate), and mat sheds have been erected to care for the overflow of students, fully qualified by character and scholastic attainment to enter, who would not be denied. Some idea of this pressure may be had from the fact that whereas in 1904 there were but 6 students of collegiate grade, in 1917 there were more than 60 in the subfreshman class alone, and in 1919 there are more students in the freshman class than in all four college grades a year and a half ago. In 1917–18 there were 10 students in college biology, whereas in 1918–19 there are 70 in the same class.

The grade of scholarship maintained is fully attested by the advanced standing granted our students who withdraw to enter universities in America, and by the progress they subsequently make.

Moreover, the opportunity for substantial and satisfying service along educational lines, combined as it is with other opportunities for research in almost untouched fields such as economics, government, sociology, ethnology, geology, and biology and in the applications of all the sciences to the agricultural and industrial development of a country whose natural wealth is as yet even unsurveyed, does not fail to attract men of high grade to membership on the faculty of the college, even on the reduced financial basis which unfortunately characterizes missionary enterprises.

It is of course essential to provide adequate facilities for effective work. Substantial results have already been obtained, even though the science laboratories are conducted in makeshift and overcrowded quarters; and a very good start has been made on a college library, which at present contains some 8,000 English and 6,000 Chinese volumes, including some very valuable journals and special publications.

SOME IMMEDIATE NEEDS.

Aside from the ever-present need of endowment, four immediate needs are intimately connected with the problem of providing the College of Arts and Sciences with a distinct entity of its own. These are a science laboratory, an agricultural building, student dormitories, and faculty residences. A fifth need, also of immediate importance in the development of the institution as a whole, is a power house, because on a campus of 130 acres, containing some 50 buildings, which house all the activities of over 1,000 people, the only power plant thus far afforded is a three horsepower oil engine pumping the water supply. No electric lights or other applications of power are yet available, except in the physics laboratory for purely experimental purposes. Yet even under these limitations this "man factory," as the Chinese call it, is a going concern; abundant high-grade "raw material" is available, a qualified staff is "on the job," the work is fully organized, the "plant" is being used to the utmost advantage, and it but remains to put more capital at the disposal of its directors in order that it may indeed keep pace with its ever-increasing opportunity to supply precisely the product which China so greatly needs for the period of reconstruction which she faces.

APPENDIX B.

PEKING UNION MEDICAL COLLEGE.

Perhaps the best illustration of what the newer medical education of China is destined to be is found in the Peking Union Medical College. This institution is itself the outgrowth of the Union Medical College which was founded in 1906 by the six English and American Missionary Boards operating in China. The time of foundation was significant, following as it did upon the disorganization of missionary work which resulted from the Boxer uprising. In 1914 the Rockefeller Foundation sent the China Medical Commission "to inquire into the condition of medical education, hospitals, and public health in China." Upon the basis of its report the corporate fusion of the two bodies was effected, and possession of the property of the old Medical College was acquired. By the terms of transfer a board of trustees of 13 members was appointed, apportioned among the founding organizations. Among these are to be noted the following men of international repute: John R. Mott, chairman; George E. Vincent, chairman of the executive committee; Wallace Buttrick, Wickliffe Rose, William H. Welch, and Simon Flexner.

Early in 1916 a provisional charter was secured from the regents of the University of the State of New York. In October, 1918, the Pre-Medical School, conducted as a feeder for the college, opened with an encouraging number of native Chinese youth enrolled, each of whom was a graduate of a modern college or high school. The first term of the college proper will open in October, 1919, with requirements for admission conforming to those laid down by the New York State Board of Regents, the Association of American Medical Colleges, and the Chinese Ministry of Education. Under special circumstances, however, conditioned students are admitted. Women students are admitted on the same footing as men; and special opportunities are offered them for training courses in modern nursing, to which only graduates from a modern middle school will be admitted.

English will for the present be the language of instruction; but, as the progress of medical education in China will ultimately lead to the necessity of instruction in Chinese, special courses in Chinese related to scientific and medical needs will be required from the beginning.

APPENDIX C.

MISSIONARY EDUCATION IN CHINA.

Women's colleges in China under mission auspices:

North China Union Women's College, Miss Luella Miner, established in 1905; 50 students in 1917.

Ginling College, Nanking, Mrs. Lawrence Thurston, established in 1915; 50 students in 1917.

Women and girls in all schools:

In 1876	1,307	In 1917	57,256
In 1907	9,929		

ROMAN CATHOLIC MISSIONS IN CHINA.

Statistics of the educational work of the Roman Catholic missions are not available.

EDUCATIONAL WORK OF THE PROTESTANT MISSIONS, 1917.

Institutions and enrollment in 1917.

	Kindergartens.	Lower elementary.	Higher elementary.	Middle.	Collegiate.	Normal and training.	Theological.	Industrial.	Medical.	Nurse.
Schools	755	5,329	573	228	18	119	30	32	21	65
Teachers	....	6,609	1,798	....	....	....	....	....	....	....
Enrollment:										
Male	....	86,941	13,434	9,201	758	816	610	488	389	....
Female	....	25,167	6,732	2,679	14	1,872	....	519	63	....
Total	349	138,943	20,832	11,892	772	3,125	....	1,375	452	715

The totals do not agree with sum of entries of separate sexes for the reason that some schools in their reports have failed to separate the sexes.

Besides the institutions listed above, there are maintained 38 orphanages with 1,158 inmates.

Chinese contributions to educational work under the Protestant missions for 1917 amounted to $1,231,149 Chinese currency.

APPENDIX D.

CHINA'S EDUCATIONAL PROGRESS.[1]

By Hollington K. Tong.

China at the present time, according to the vice minister of education, Yuan Hsit'ao, has over 134,000 modern schools of different types, including normal, industrial, and technical schools, colleges, and universities, but in 1910 there were only 52,650 schools. The number of schools has thus been more than doubled in only eight years. To-day there are in China 4,500,000 students, 326,000 teachers and administrative officers, and the annual expenditure of the Central and provincial governments is approximately $40,000,000, but in 1910 there were only 1,625,534 students, 185,566 teachers and administrative officers, and the educational expenditure was Tls. 24,444,309, or about $33,000,000. The above figures show that, although the number of students has increased by three-fourths, the amount of educational expenses has increased by less than $7,000,000. The result, according to the educational authorities, is the poorer school equipment, the poorer teaching staff, and the general inefficiency of most of the schools. This alarming situation is now receiving the serious consideration of public-spirited citizens. Unless it is remedied promptly, the future generations will be seriously affected. Quite a number of thinking Chinese are realizing the danger to the Republic if no adequate provision is made for the younger generation to receive a sound education, knowing that no republic can exist if its people are not properly educated.

"Since the establishment of the Republic, the educational funds of the central and provincial governments have been much reduced," declared the vice minister of education in an interview. In 1907, when Chang Tse-tung was viceroy of Hupeh, that Province annually expended $1,000,000 for educational purposes. At present it expends only something like $400,000 a year. In the last days of the Manchu régime, Kiangsu Province devoted over $2,000,000 a year to the education of its people, but now it expends only $1,100,000 annually.

"There are now more schools of various types than before," continued Vice Minister Yuan, "but they are not so well equipped. The laboratories in most of the schools, for instance, are lacking in experimental apparatus, and none of the colleges or universities has a good library for research work, which is much needed for advanced students. One interesting fact is that although the number of schools has been doubled during the last eight years, the number of students has been more than trebled. The result is that the existing schools are unable to accommodate all the aspiring young men and women, and that those students for whom accommodation has been found can not and do not receive the maximum amount of benefit on account of the lack of teachers and the consequent neccessity to attend too large a class.

"After the unification of the north and south the ministry of education will devote the best of its attention to remedying the existing defects and further to promote universal education. Hitherto, the civil war has cost China much money, and all the available funds which might have been appropriated for educational purposes in ordinary times have been requisitioned for military purposes. When the war is over, the claim of the ministry of education for more educational funds, we trust, will unquestionably receive a sympathetic hearing from the Government.

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[1] From Millard's Review (Shanghai), Mar. 22, 1919.

"In future the ministry will try its best to encourage higher and technical education by making special grants. It is now making plans for the dispatch of more college graduates to foreign countries to pursue a higher education. Social education in future will also be encouraged. Efforts are being made to impress upon the people the importance of knowledge, and the necessity of good and moral conduct. Our educational object is to give such education to the people that it will enable them to be useful men. I mean that we want to give them practical education. Personally, I do not believe in education by text books. Neither have we overlooked the usefulness of physical education. In former times learned Chinese were unable to make good use of their education because of their physical weakness. This condition is being remedied. I sincerely hope that a way will be found after the unification of China to make education as universal as possible."

In reply to an inquiry about the present status of the Chinese educational progress, Vice Minister Yuan gave the following interesting and up-to-date information which, however, does not cover a survey of the mission and private schools in China.

1. PRIMARY SCHOOLS.

The primary schools are of two grades: The lower primary school and the higher primary school. The course of study in the lower primary school is to be completed in four years and that in the higher primary school in three years. It is the duty of every parent to send his boy to school as soon as the latter reaches six years of age. This rule will be uniformly enforced and strictly carried out after the unification of China. The number of kindergartens in China is rather small, but the following statistics regarding the primary schools in the different Provinces for the fourth year of the Republic (from August, 1915, to July, 1916), which are the latest, may be of interest:

Lower primary schools.

Names of Provinces.	Number of schools.	Number of students.	Teachers and administrative officers.	Expenses.
Metropolis	216	21,073	594	382,730
Metropolitan district	1,154	30,026	2,403	188,590
Chihli	14,288	423,537	32,895	1,418,415
Fengtien	5,489	195,898	8,050	1,372,093
Kirin	758	31,522	1,493	340,061
Heilungkiang	967	28,537	1,197	286,515
Shantung	14,375	395,490	39,345	1,299,290
Honan	7,326	185,649	15,604	395,413
Shansi	10,817	304,283	20,711	737,677
Kiangsu	5,845	262,735	15,103	1,704.129
Anhwei	1,135	41,139	2,719	225,139
Kiangsi	3,026	91,761	7,842	407,239
Fukien	1,150	51,184	4,880	359,703
Chekiang	6,621	288,644	17,966	1,448,237
Hupei	9,118	216,582	13,539	456,729
Hunan	3,881	121,264	9,774	609,020
Shensi	4,913	121,176	12,611	244,558
Kansu	1,414	34,493	1,960	54,428
Sinkiang	53	2,602	76	42,523
Szechuen	13,832	436,017	26,501	1,060,202
Kwangtung	4,093	161,003	13,302	1,163,503
Kwangsi	1,560	48,665	3,225	389,253
Yunnan	4,678	167,954	9,602	470,704
Kweichow	1,411	54,292	4,346	183,395
Jehol	464	10,686	761	48,344
Suiyuan	262	5,925	263	21,765
Charhar	181	4,381	239	13,100
Total	119,007	3,786,513	267,041	15,022,755

Table showing the higher primary schools of the whole country.

Names of Provinces.	Number of schools.	Number of students.	Teachers and administrative officers.	Expenses.
Metropolis	61	4,034	497	$171,782
Metropolitan District	54	2,091	191	58,311
Chihli	405	25,808	1,827	667,014
Fengtien	351	20,102	1,297	540,077
Kirlin	88	4,024	321	199,172
Heilungkiang	65	2,759	241	163,471
Shantung	381	16,078	1,481	369,780
Honan	224	12,594	755	236,757
Shansi	225	13,788	1,067	241,877
Kiangsu	458	26,625	3,224	751,377
Anhwei	253	10,024	1,327	246,312
Kiangsi	421	19,474	2,040	345,605
Fukien	489	14,539	3,210	318,817
Chekiang	720	31,143	3,985	667,561
Hupei	182	13,158	963	253,385
Hunan	341	21,126	2,066	248,621
Shensi	140	7,917	824	173,880
Kansu	139	4,227	542	82,289
Sinkiang	6	147	10	14,029
Szechuen	835	44,280	4,751	744,481
Kwangtung	1,100	45,998	6,088	990,675
Kwangsi	330	12,766	1,364	269,038
Yunnan	318	21,446	1,333	219,888
Kueichow	235	10,639	1,369	147,897
Jehol	21	907	89	29,137
Suiyuan	7	874	16	7,069
Charhar	13	297	46	15,415
Total	7,862	386,365	40,915	9,173,717

2. MIDDLE SCHOOLS.

The aim of the middle schools is to furnish general education and to develop strong and intelligent citizens. The course of the middle school is four years. Graduates from the higher primary school or those who have passed examinations showing a similar grade of scholarship are allowed to enter the middle school. Owing to the great demand for vocational education, special courses will be offered to the students of the middle school, besides the regular courses.

The following is the table regarding the middle schools in China for the sixth year of the Republic (from August, 1917, to July, 1918):

Middle schools in 1917–18.

Names of Provinces.	Schools.	Teachers.	Administrative officers.	Classes.	Students.	Graduates.	Expenses.
Metropolis	12	188	67	39	3,092	492	$54,912
Metropolitan districts	5	33	15	10	551	44	9,240
Chihli	2	258	27	79	3,321	2,302	122,072
Fengtien	17	158	70	43	1,960	489	80,791
Kirlin	8	70	30	16	906	....	....
Heilungkiang	2	21	10	18	421	132	25,000
Shantung	21	261	79	49	3,406	504	106,077
Shansi	20	186	129	51	2,854	647	157,840
Shensi	6	87	39	31	1,530	187	85,796
Honan	16	155	80	44	2,885	1,254	84,166
Kiangsu	21	208	74	50	2,898	488	100,786
Anhwei	11	83	39	29	1,126	497	37,260
Chekiang	23	371	169	72	5,526	1,873	29,160
Kiangsi	18	218	88	71	3,014	740	48,960
Hupei	26	226	79	51	2,896	622	18,512
Hunan	45	691	245	243	8,614	1,453	240,313
Szechuen	55	283	102	69	8,008	2,316	.. ..

Middle schools in 1917-18—Continued.

Names of Provinces.	Schools.	Teachers.	Administrative officers.	Classes.	Students.	Graduates.	Expenses.
Kwangtung	52	480	194	111	7,105	20,848	$245,478
Kwangsi	22	185	76	54	2,573	417	106,029
Yunnan	14	136	51	33	1,654	630	87,711
Kueichow	6	93	40	28	1,664	443	40,215
Fukien	18	251	195	66	2,600	965	28,679
Kansu	4	69	33	16	667	117	20,046
Charhar	1	5	2	86	....	....	....
Jehol	2	28	11	6	279	47	....
Suiyuan	1	6	3	1	49	45	....
Total	428	4,750	1,956	1,366	69,598	37,581	1,741,058

The following is the table giving particulars of the girls' middle schools in China for the sixth year of the Republic:

Girls' middle schools.

Names of Provinces.	Schools.	Teachers.	Administrative officers.	Classes.	Students.	Graduates.	Expenses.
Metropolis	1	20	7	4	229	....	....
Heilungkiang	1	9	4	2	100	....	....
Kiangsu	5	76	26	5	221	47	$13,260
Hupei	1	9	4	1	36	....	10,020
Fukien	1	18	6	1	36	25	....
Total	9	132	47	13	622	72	23,280

3. NORMAL SCHOOLS.

The normal schools are of two grades—the normal school and the high normal school. The purpose of normal schools is to train teachers for the primary school, and that of the higher normal schools is to train teachers for the middle schools. Students of the normal schools, both Government and public, are exempted from payment for tuition and are given certain allowances to defray their expenses. The amount of such allowance varies according to the number of years the students are required to serve as teachers after their graduation. The normal school gives the preparatory course and the regular course. The preparatory course is for one year. The regular course is to be divided into two parts; first part of the course is for four years and the second part one year. Graduates from the higher primary schools, or students showing a similar grade of scholarship, are qualified to take the preparatory course. Students completing the preparatory course and graduates from the middle schools are qualified to take the second part of the regular course. Courses for training primary school and kindergarten teachers may be added to the curriculum of the normal school.

The higher normal school gives the preparatory course, regular course, and special research course. Elective and special courses may be added when occasion requires. The preparatory course is for one year, the regular course three years, and the special research course two years. Graduates from middle schools or normal schools or students of equivalent scholarship are allowed to take the preparatory course. After completing the preparatory course the students are allowed to take the regular course, and then the special research course.

The following table gives particulars of the normal schools in China for the sixth year of the Republic:

Normal schools.

Names of Provinces.	Schools.	Administrative officers.	Teachers.	Classes.	Students.	Graduates.	Expenses.
Metropolis	1	13	18	5	214	26	$58,298
Metropolitan district	1	7	9	4	164	39	33,160
Chihli	5	30	76	35	1,372	194	158,244
Fengtien	18	41	121	42	1,777	228	129,577
Kirin	4	19	51	15	604	113	93,630
Heilungkiang	2	7	22	9	400	40	71,067
Shantung	4	25	67	30	1,022	258	171,124
Shansi	4	26	64	26	1,178	165	88,392
Honan	5	40	57	19	811	82	121,404
Shensi	2	19	25	9	489	108	65,076
Kansu	4	18	120	8	401	219	42,782
Kiangsu	10	122	193	54	2,287	510	374,452
Chekiang	11	82	182	51	1,865	183	217,350
Anhwei	5	50	71	25	1,053	26	125,278
Kiangsi	5	25	71	20	895	167	81,744
Hupei	4	22	85	17	919	127	94,358
Hunan	6	43	157	25	1,545	30	138,302
Szechuen	10	53	92	30	1,458	101	145,820
Hsinkiang	1	3	6	1	60	40	16,549
Fukien	4	33	64	15	495	32	74,992
Kwangtung	8	30	88	15	503	39	42,968
Kwangsi	3	14	38	14	507	41	75,447
Yunnan	7	49	406	22	1,175	233	130,019
Kueichow	1	7	26	5	228	86	25,000
Jehol	1	3	7	2	73	....	7,380
Charhar	1	2	4	2	80	....	8,971
Total	127	782	2,120	500	21,575	3,036	2,629,444

The following table gives particulars of the girls' normal schools, also for the sixth year of the Republic:

Girls' normal schools.

Names of Provinces.	Schools.	Administrative officers.	Teachers.	Classes.	Students.	Graduates.	Expenses.
Metropolis	2	2	39	8	222	56	$71,981
Chihli	2	18	42	10	353	96	72,176
Fengtien	5	10	45	13	504	161	32,027
Kirin	2	4	16	6	185	....	32,184
Heilungkiang	1	4	17	8	134	....	26,784
Shantung	2	13	32	10	357	....	37,374
Shansi	2	14	28	7	188	27	33,600
Honan	1	7	16	2	85	16	25,124
Shensi	1	12	20	8	60	14	23,907
Kansu	1	2	6	1	27	8	4,674
Kiangsu	5	42	71	17	498	68	88,555
Chekiang	6	31	84	21	432	43	50,422
Anhwei	2	16	22	6	180	32	19,687
Kiangsi	2	9	28	8	85	....	14,038
Hupei	1	3	22	8	12	....	24,780
Hunan	10	56	135	81	960	82	93,647
Szechuen	3	18	77	10	301	....	47,800
Fukien	1	10	21	5	184	14	20,184
Kwangtung	3	11	57	6	257	8	15,687
Yunnan	1	4	17	3	141	39	1,023
Kueichow	1	2	7	1	38	....	25,000
Total	54	289	802	169	5,203	659	755,604

The following table shows the high normal schools of the whole country:

Number of schools	7
Number of administrative officers	165
Number of teachers:	
Deans	35
Professors	107
Instructors	155
Assistants	8
Preparatory students	540
Collegiate students:	
National language	229
English	228
History and geography	93
Mathematics	131
Science	138
Philosophy	120
Mathematics and science	93
Literature and history	40
Special-course students:	
Manual labor and drawing	73
Physical training	117
National language	155
Agriculture	29
Industry	39
Commerce	30
English	22
Drawing and music	37
History and geography	42
Science	41
Elected-course students:	
Special	27
Postgraduate	64
Handwork	62
Special training in teaching	42
Lecture	119
Research	10
Total number of students	2,517
Number of graduates	407
Expenses	$959,060

4. TECHNICAL SCHOOLS.

The technical schools are of two grades. A and B courses in agriculture, technique, commerce, shipbuilding, and the like are given. Besides, technical schools have been established for girls. The A grade requires one year's preparatory work and gives a course of three years. The work of B grade covers a period of three years. The special and elective courses may be added according to the nature of the location of the school.

The table of the technical schools of the whole country is as follows:

Technical schools.

Names of schools.	Schools.	Administrative officers.	Teachers.	Classes.	Students.	Graduates.	Expenses.
Agricultural school (A)	54	383	640	198	5,998	897	$682,131
Industrial school (A)	29	214	492	168	4,352	579	664,747
Commercial school (A)	27	162	333	91	3,066	358	251,774
Technical school (A)	1	1	5	2	56		1,800
Agricultural school (B)	240	412	622	354	9,784	1,054	277,217
Industrial school (B)	34	74	153	64	1,692	42	62,500
Commercial school (B)	68	128	299	133	3,627	301	30,414
Technical school (B)	2	7	15	5	156	43	3,692
Women's vocational schools	20	79	194	74	1,719	230	63,883
Teachers' industrial training schools	2	4	4	7	204		
Total	477	1,464	2,757	1,091	30,654	3,504	2,138,158

Different courses given in the technical schools.

Technical subjects.	Institutions giving—		
	(A) Advanced course.	(B) Elementary course.	Women's vocational course.
Agriculture	39	131	
Forestry	18		
Sericulture	80	117	2
Silk-producing work			1
Fishery	3		
Manufacture	3		
Veterinary	1		
Cotton picking			1
Fabric dyeing	11	27	6
Dyeing	1		
Carpentry	1	5	
Rattan works		1	
Rattan and bamboo works		7	
Varnishing		1	
Wheel works		1	
Hand labor			1
Civil engineering	8		
Goldsmithry	9		
Dynamic electricity	2		
Current electricity	1		
Electrical engineering	1		
Applied chemistry	8		
Mineralogy	6		
Mining	2		
Drawing	1		
Designing	1		
Surveying	1		
Tapestry			1
Pottery	1	1	
Pottery painting	1		11
Embroidery			9
Sewing			4
Tailoring			4
Imitation flower			1
Braiding			1
Lace making			1
Hair netting			1
Fine arts			1
Commerce	27	70	
Total	176	361	44

5. COLLEGES AND UNIVERSITIES.

The college is divided into preparatory, collegial, and post-graduate departments, in which courses on political science, law, medicine, agriculture, technique, commerce, fine arts, music, foreign languages, and the like are given. The preparatory course is for one year, the college course covers three years, and the post-graduate course requires two years. Graduates from the middle school or students of equivalent scholarship are allowed to enter the preparatory department after passing the necessary examinations. The preparatory department of a university covers a period of two years and the college department a period of four years.

Higher educational institutions.

Institutions.	Schools.	Courses.	Students.	Administrative officers.	Teachers.	Expenses.
Universities:						
Government...	3	Preparatory, arts, science, engineering, and law.	2,811	67	207	$870,000
Private........	3	University: Preparatory, arts, law, commerce. College: Preparatory, law, politics, economics, and commerce.	1,893	15	150	74,165
Colleges of law:						
Government...	1	Preparatory, law, economics, political economics.	622	20	5	101,500
Public.........	20	Preparatory, law, economics, politics, and commerce.	3,573	363	459	549,452
Private........	13	Preparatory, law, politics, economics, and commerce.	2,121	93	202	36,870
Colleges of agriculture:						
Government...	1	Preparatory, agriculture, and forestry..	171	18	21	91,200
Public.........	6	Preparatory, agriculture, forestry, silkworm, and sericulture.	568	80	129	262,300
Technical colleges:						
Government...	1	Preparatory, mechanics, electric engineering, and applied chemistry.	242	18	39	126,036
Public.........	8	Preparatory, civil engineering, dynamics, applied chemistry, mining, and dyeing.	1,087	130	214	606,072
Colleges of commerce:						
Government...	1	Preparatory and commerce............	134	14	25	42,168
Public.........	4	Preparatory, commerce, and banking..	266	34	90	98,708
Private........	1	Commerce............................	41	8	24	9,500
Medical colleges:						
Government...	1	Medicine.............................	174	46	22	103,000
Public.........	4	Medicine and pharmacy...............	391	50	48	146,886
Private........	3	Preparatory and medicine............	211	24	56	215,000
Foreign language college:						
Public.........	4	Preparatory, English, Japanese, German, and Russian.	605	33	67	102,340
College:						
....	3	Preparatory, spinning, civil engineering, mechanics, medical, and engineering.	290	36	76	135,468
		Total..............................	16,150	1,058	1,834	3,570,984

6. SOCIAL EDUCATION.

The Ministry of Education has appointed special officials to develop social education. Plans for the promotion of social education have been receiving much attention from the ministry, but owing to the unsettled condition of the country the program can not be fully carried out as expected. The following is a list of the institutions already established for the promotion of social education:

Libraries	175
Elementary libraries	287
Moving libraries	257
Elementary lecture institutions	2,129
Open-air lecture institutions	659
Newspaper reading office	1,727
Museums	10
Schools for backward students	81
Half-day schools for poor and destitute	1,242
Open-air schools	37
Elementary reading schools	4,593

PEKING, *March 15, 1919.*

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 45

THE ACCREDITED SECONDARY SCHOOLS OF THE NORTH CENTRAL ASSOCIATION

By

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WASHINGTON
GOVERNMENT PRINTING OFFICE
1920

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WASHINGTON, D. C.
AT
25 CENTS PER COPY

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PREFACE.

The bases for the analyses and deductions presented in this study have been the annual reports of 1,119 secondary schools accredited by the North Central Association, together with approximately 20,000 individual teachers' report cards. To scrutinize and compile the data therein contained has required the services of a rather large staff of assistants working almost continuously for a period of 12 months or more. Most of the persons were graduate or other advanced students enrolled in my several courses in education at the University of Michigan. Their work has been indefatigable, and words of highest commendation and appreciation are due them.

To mention by name all those who have thus helped to make this study possible would, doubtless, be an unnecessary and profitless procedure. Some spent relatively few hours at the task; some devoted a portion of their time for a few weeks; and some made it their major work for months. Among the latter, special recognition should be given to the following: William J. Baumgartner, D. G. Clancy, Robert Cole, Harry T. Day, Catherine M. Regan, Abagail Blackburn, Olive G. Turner, Chloe Hardy, Fred Fleagle, H. A. Davis, C. W. Bemer, Henry A. Tape, and Guy Fox. Unstinted praise and sincere thanks are herewith gratefully given to them.

I wish also to acknowledge my indebtedness to Profs. Horace A. Hollister and James B. Edmonson, who kindly read the manuscript and offered many valuable suggestions.

The general procedure followed in the study was as follows: The original school reports were first classified in workable groups and the data transcribed on large charts, *by States*. From these detailed charts, which contained virtually every item reported by each school and each teacher, tables of condensed material, by *topics*, were formed. Finally, from these tables other summarizing tables, charts and graphs were produced. Only the latter appear in the pages which follow in the bulletin.

While the utmost precautions have been taken to make the study accurate and clear, discrepancies (and possibly apparent errors) are likely to be found in certain tables and conclusions. Superintendents and principals, in filling out the annual blanks, were not always guided by like powers of discrimination and exactness. Omissions frequently occurred. Approximations were sometimes used, and, occasionally, obvious clerical errors were discovered. Nevertheless, so far as possible, these original faults in the reports were traced to their sources, and by means of counterreferences, were fairly evaluated and corrected. Moreover, verifications of data have been made with each step of the process of compilation. Hence it can be claimed with reasonable certitude that the figures herein presented represent the facts as they are to be found in the North Central territory. In certain compilations, as, for example, in the average number of units of work offered in the several schools and in recording the number of teachers of academic and vocational subjects, fractional units and part-time arrangements were omitted and the data recorded in terms of the nearest integer.

Finally, as a personal testimonial, I take this opportunity to express the pleasure and the helpfulness which have come to me personally in carrying forward this work, and in seeking to interpret the findings. Each step of the way has opened new vistas for me. Each topic, as it was completed, added to my comprehension of the public-school system of the Northwest and gave deeper insight and keener appreciation of its problems, processes, and tendencies. If similar experiences shall come to school men as they study the bulletins, the work will not have been undertaken in vain.

C. O. Davis,
University of Michigan.

THE ACCREDITED SECONDARY SCHOOLS OF THE NORTH CENTRAL ASSOCIATION.

PART I.—INTRODUCTION AND GENERAL INFORMATION.

AUTHORIZATION OF THE STUDY.

At the time of the twenty-second annual meeting of the North Central Association of Colleges and Secondary Schools, held in St. Louis, Mo., March 23-24, 1917, authority was given the Commission on Secondary Schools to make a detailed comparative study of the data gathered that year from the accredited secondary schools. For the benefit of those persons unfamiliar with the organization and administration of the North Central Association, it is pertinent to state that once in five years (until 1917 once in three years) a complete detailed report to the association has been required from each secondary school seeking to be accredited. The commission has for some time felt that the extensive and varied data thus gathered constitute a body of educational material too valuable to be utilized temporarily for the purpose of accrediting schools and then be filed away in dingy archives never perchance to be examined again. It has, therefore, on two previous occasions authorized the utilization of the annual report blanks for studies of a comparative kind. The first of these, *North Central High Schools*, was compiled and edited by Prof. Walter A. Jessup, of the State University of Iowa, and Prof. Lotus D. Coffman, at that time connected with the University of Illinois. This study appeared in 1914.[1] The second comparative analysis was directed by Prof. Charles H. Judd and Mr. George S. Counts, of the University of Chicago. This study was published in 1915 and bears the title: *A Study of the Colleges and High Schools in the North Central Association.*[2]

The present study seeks to follow the same general plan employed in the two earlier analyses. In certain particular details it, of course, departs entirely from the procedure followed there. Moreover, in addition to the comparisons made in reference to the situation as it existed in 1916-17, the present study seeks to place its findings in juxtaposition with similar findings presented in the earlier reports, and thus to reveal conspicuous changes or tendencies which have occurred since 1911–12, the year in which the data used in the Jessup-Coffman study were gathered.

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[1] Reprinted from the Thirteenth Yearbook of the National Society for the Study of Education. University of Chicago Press, Chicago, Ill.

[2] Issued by the United States Bureau of Education, Bulletin, 1915, No. 6.

The aim of the North Central Association is declared in the Constitution, Article II. It reads as follows:

> The object of the association shall be to establish closer relations between the secondary schools and institutions of higher education within the North Central States and such other territory as the association may recognize.

That these aims are, to a large degree, realized is evidenced by the steady growth of the association in territorial accessions, in the the number of affiliated and accredited schools and colleges, and in the power and prestige exercised in respect to educational policies and practices throughout the country. Eighteen States are to-day embraced within the association. These are: Arizona, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Wisconsin, and Wyoming. At the time of the annual meeting, March, 1917, the association accredited 1,165 high schools and academies distributed among these 18 States.

In accrediting the schools, the following formal standards were employed, standards that have (with slight alterations and amendments made from time to time) been enforced since their first publication in 1904.

STANDARDS OF ACCREDITING SECONDARY SCHOOLS (1916–17).

1. No school shall be accredited which does not require 15 units for graduation. More than 20 periods per week should be discouraged. The school year shall consist of a minimum of 36 weeks, such standard to be in effect on and after September 1, 1918.

A unit course of study in a secondary school is defined as a course covering an academic year that shall include in the aggregate not less than the equivalent of 120 sixty-minute hours of classroom work, two hours of manual training or laboratory work being equivalent to one hour of classroom work.

2. All teachers teaching one or more academic subjects must satisfy the following standards:

A. The minimum attainment of teachers of academic subjects shall be equivalent to graduation from a college belonging to the North Central Association of Colleges and Secondary Schools requiring the completion of a four-year course of study or 120 semester hours in advance of a standard four-year high-school course. Such requirement shall not be construed as retroactive.

B. The minimum professional training of teachers of academic subjects shall be at least 11 semester hours in education. This should include special study of the subject matter and pedagogy of the subject to be taught. Such requirements shall not be construed as retroactive. (For the succeeding year the board will interpret courses in education as the same courses are interpreted by the colleges or universities offering them.)

C. If a teacher, new to a given high school, does not fully meet the requirement of the above standards but, in the opinion of the inspector, possesses the equivalent of the training prescribed, the inspector shall submit to the board of inspectors a statement concerning the training, experience, and teaching efficiency of the said teacher, together with his recommendation. The board shall, on each case presented, make a decision.

3. The number of daily periods of classroom instruction given by any teacher should not exceed five, each to extend over at least 40 minutes in the clear. The board of inspectors will reject all schools having more than six recitation periods per day for any teacher.

4. The laboratory and library facilities shall be adequate to the needs of instruction in the subjects taught.

5. The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the lavatories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both pupils and teachers.

6. *The efficiency of instruction, the acquired habits of thought and study, the general intellectual and moral tone of a school are paramount factors, and therefore only schools which rank well in these particulars, as evidenced by rigid, thorough-going, sympathetic inspection, shall be considered eligible for the list.*

7. The association will decline to consider any school whose teaching force consists of fewer than four teachers of academic subjects exclusive of the superintendent. The association recommends the introduction of the so-called vocational subjects, such as agriculture, manual training, household arts, and commercial subjects into schools where local conditions render such introduction feasible, but the inspectors will hold that a sufficient number of qualified teachers must be added to provide adequately for such instruction.

8. No school shall be considered unless the regular annual blank furnished for the purpose shall have been filled out and placed on file with the inspector. Schools in good standing will make a complete report on teachers once in five years; but full data relative to changes should be presented annually.

9. No school whose records show an excessive number of pupils per teacher, based on average attendance, shall be accredited. The association recommends 25 as a maximum. No recitation class should enroll more than 30 pupils.

10. The time for which schools are accredited shall be limited to one year, dating from the time of the adoption of the list by the association.

11. The agent of communication between the accredited schools and the secretary of the commission for the purpose of distributing, collecting, and filing the annual reports of such schools and for such other purposes as the association may direct, is as follows:

(*a*) In States having such an official, the inspector of schools appointed by the State university. (*b*) In other States the inspector of schools appointed by State authority, or, if there be no such official, such person or persons as the secretary of the commission may elect.

The association is conservative, believing that such policy will eventually work to the highest interests of all. It aims to accredit only those schools which possess organization, teaching force, standards of scholarship, equipment and esprit de corps, of such character as will unhesitatingly commend them to any educator, college, or university in the North Central territory.

The range, purport, and character of the data collected from the several schools may be best comprehended by an analysis of the blank form which was used for that purpose in 1916–17, which is here reproduced.

NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS.

(NOTE.—This is the year for a complete report from all schools. See Standard 8.)

ANNUAL REPORT of the..High School,

Located at..............................State of..............................

....

(Superintendent) (Principal)

Check thus (X) the name of each of the above school officials who have read this report.

(A) GENERAL INFORMATION.

1. Population of city..
2. Enrollment November 1, 1916: (a) boys............(b) girls.............(c) Number in fourth year class............(d) Number in third year class........ ......(e) Number in second year class............(f) Number in first year class............(g) Total enrollment............
3. Number of high school teachers (include superintendent and principal if they teach one or more classes)............
4. Average number of pupils belonging for October............
5. Average belonging per teacher............
6. Since what date has the school been *continuously* accredited by the Association? ....
7. How many weeks of actual school work are given? (In answering this question include examination, commencement, and other regular exercises. Count out all vacations, as Christmas and Easter, but do not count out a single legal holiday, such as Washington's birthday, nor the two days usually given at Thanksgiving time)............
8. Number of graduates last year: (a) boys.....(b) girls.........(c) total..........
9. Number of last year's graduates now attending higher institutions of learning ....
10. Number of nonresident pupils enrolled in high school this year (Nov. 1)..........
11. Is it the avowed future policy of the school to employ, for academic subjects, none but college graduates with professional training? (See Standard 2A and B)..
12. Is it the avowed future policy of the school to maintain the ratio of teachers to pupils at approximately 1 to 25?....................................

(B) THE TEACHERS.

(NOTE.—The information for this summary should be taken from the individual record cards of the teachers (include the superintendent and principal if they teach one or more classes).)

1. Number who give instruction in high school: (a) men............ (b) women ....(c) total............
2. Numbers of teachers of (a) Academic subjects................ (b) Vocational subjects*............
3. Number of *new* teachers (a) Academic subjects............ (b) Vocational subjects*............ (c) Total number new teachers............
4. Of the *new* teachers of academic subjects, how many are not graduates of a standard college? (See Standard 2A)............
5. Of the *new* teachers of academic subjects, how many have not had 11 semester hours in education? (See Standard 2B)............
6. Of the *new* teachers of academic subjects, how many have had no previous teaching experience?............

---

*For purposes of this report the following subjects are to be included under vocational subjects: Manual Training, Home Economics, Music, Agriculture, Commercial Subjects, Art and Drawing.

7. Of the academic teachers, not new to the school this year, how many are not graduates of a standard college?............
8. Of the academic teachers, not new to the school this year, how many have not had 11 hours in education?............
9. Of the vocational teachers, how many are graduates of a standard college?........ What subjects do these college graduates teach?...............................
10. Number of periods in school day............ Length of periods in minutes ....
11. Number of teachers of academic subjects who teach the following number of periods per day: 1............, 2............, 3............, 4............, 5............, 6............, 7............
12. Number of teachers of academic subjects whose periods of recitation, laboratory, and study-hall duty exceed thirty-five 40-minute periods per week............
13. What is the greatest number of 40-minute periods assigned to any vocational teacher per week?............ What subject?..............................
14. Number of classes with more than 30 pupils.......... What subjects? ....
15. Experience: (*a*) Number of teachers with no teaching experience prior to this year............; (*b*) Number of teachers with teaching experience, but less than 3 years............; (*c*) Number of teachers with 3 years' experience but less than 6............; (*d*) Number of teachers with 6 years' experience but less than 15............; (*e*) Number of teachers with more than 15 years' experience............
16. Salary (exclude superintendent and principal): (*a*) Number with salary less than $675; Academic............, Vocational..........; (*b*) Number with salary $675 to $899; Academic............, Vocational............; (*c*) Number with salary $900 to $1,199; Academic............, Vocational............ (*d*) Number with salary $1,200 to $1,799; Academic............, Vocational ....; (*e*) Number with salary above $1,800; Academic............, Vocational............

(c) BUILDING AND EQUIPMENT.

1. (*a*) Is the high school building commodious, safe, and hygenic? (See Standard 5)..........., (*b*) When was the high school building constructed?...........
2. Number of volumes in the high school library............
3. Number of dollars expended for library annually............
4. Value of equipment: Physics............; Chemistry............; Biological science............; Agriculture............; Manual training............; Cooking............; Sewing............; Commercial Subjects............; Physical geography................; Value of maps and charts................; Value of gymnasium and playground............; Estimate of value of complete plant, building, equipment, and grounds............

What changes or additions to the standards of the association do you suggest? (Use separate sheet for answer.)

(D) PROGRAM OF STUDIES.

(Fill out the blank in full for each subject offered. For definition of unit see Standard 1.)

Academic.	Number of units offered.	Number of recitations per week.	Length of a recitation period.	Number of laboratory periods per week.	Length of a laboratory period.	Length of course in weeks.
English						
Latin						
Greek						
German						
French						
Spanish						
History:						
(a) Anc. Hist.						
(b) M. & M. Hist.						
(c) Eng. Hist.						
(d) U. S. Hist. and Civics						
Algebra						
Geometry						
Trigonometry						
Physics						
Chemistry						
Botany						
Zoology						
Gen. Biology						
Physiology						
Phys. Geog						
Geology						
Gen. science						
Sociology						
Economics						
Publ. Speaking						
Total						

Vocational.	Number of units offered.	Number of recitations per week.	Length of a recitation period.	Number of laboratory periods per week.	Length of a laboratory period.	Length of course in weeks.
Art						
Music						
Agriculture						
Cooking						
Sewing						
Comm. Subjects:						
(a) Bookkeeping						
(b) Stenography						
(c) Typewriting						
(d) Comm. Arith.						
(e) Comm. Law						
Manual Training						
Normal Tr. Courses						
Physical Educ.						
Total						

1. Which, if any, of the above units do not meet the time requirement? (See Standard 1.)............
2. Which, if any, of the above units are not counted toward graduation?...............................

[Individual card—Obverse.]

RECORD OF TEACHER, PRINCIPAL, AND SUPERINTENDENT.

(To be filled out by each Teacher, Principal, and Superintendent.)

Name..
(Last) (First) (Middle)

Name of high school...........................Located in city of...................

Preparation:

High Sch., Place.............................No. yrs..........Grad. Date..........

Normal Sch., Place...........................No. yrs.........Grad. Date..........

College, Place...............................No. yrs..........Grad. Date.........

University, Place............................No. yrs.........Grad. Date.........

Post Grad., Place............................No. yrs..........Grad. Date.........

What is your highest college degree..................? Major subject in college or normal-school preparation..............? Minor subject.......................?

Number of semester hours' credit in Education (See Standard 2B)..................?

[Individual card—Reverse.]

EXPERIENCE:

Number months taught prior to current year: (a) In training school.............. (b) In rural or elementary graded schools.............. (c) In high schools .... (d) Any other schools.................. Total *years* of teaching experience................ Number years in present position prior to this year .... Salary this year.................

WORK: Classes taught at any time *this* semester.

SUBJECT.	PERIODS PER WEEK.	LENGTH OF DAILY PERIODS IN MINUTES.	NUMBER IN CLASS.
1.	....	....	....
2.	....	....	....
3.	....	....	....
4.	....	....	....
5.	....	....	....
6.	....	....	....
Total			

Mark thus (*) the subjects given above that were not your major or minor subjects in college or normal-school preparation.

Number of periods per week in charge of assembly or study hall..........................

Total number of periods per week of teaching, laboratory and study-hall work.........................

THE PLAN OF THE STUDY.

The Jessup-Coffman report of 1914 was based on State divisions and the *population* of the cities containing the high schools. The latter were grouped in seven classes. The Judd-Counts study employed the same classification as the previous report, and in addition made use of the classification by *enrollment*. Schools were divided into six groups: Those with 100 students or less, those with from 101 to 200 students, from 201 to 300, from 301 to 500, from 501 to 1,000, and those with more than 1,000 students.

In the present study, while retaining the classification by States, a modified plan of regrouping the schools was adopted. The Association not only accredits public secondary schools, but many nonpublic schools. The aims, organization, and administration of these nonpublic schools differ in many respects from those of the public schools. It seemed desirable, therefore, to classify these schools by themselves. In consequence, throughout this study a fivefold grouping of the schools has been maintained. This grouping includes: (1) Military schools; (2) parochial or denominational schools; (3) purely private schools; (4) preparatory secondary schools attached to institutions of higher learning, as, for example, the Chicago University High School, or the Normal High School connected with the State Normal School at Kalamazoo, Mich.; and (5) public high schools.

In like manner the classification of schools into a large number of divisions based on enrollment seemed to be unfortunate and to lead to unprofitable comparisons. Based on enrollment there are really only three commonly accepted classifications of schools. These are

Eaton.
Fort Collins.
Fort Morgan.
Fruita (Union H. S.)
Glenwood Springs:
  Garfield County.
Golden.
Grand Junction.
Greeley.
Gunnison:
  Gunnison County.
La Junta.
Las Animas:
  Bent County.
Leadville.
Longmont.
Loveland.
Monte Vista.
Montrose:
  Montrose County.
Pueblo:
  Centennial.
  Central.
Rocky Ford.
Salida.
Telluride.
Trinidad.
Victor.

ILLINOIS

Alton:
  High School.
  W. Military Academy.
Aurora:
  East.
  West.
  Jennings Seminary.
Batavia.
Beardstown.
Belleville.
Belvidere.
Benton Tp.
Bloomington.
Blue Island.
Bridgeport Tp.
Cairo.
Carbondale:
  N. Univ. H. School.
Carthage:
  College Acad.
Centralia Tp.
Champaign.
Charleston.
Chicago:
  Austin.
  Bowen.
  Calumet.
  Carl Schurz.
  Crane Technical.
  Englewood.
  Fenger.
  Harrison Tech.
  Hyde Park.
  Lake.
  Lake View.
  Lane Tech. (Tilden).
  Lucy Flower Tech.
  Marshall.
  McKinley.
  Medill.
  Morgan Park.
Chicago—Continued.
  Parker.
  Phillips.
  Senn.
  Tuley.
  Waller.
  F. W. Parker School.
  Harvard School.
  Latin School.
  Loyola Academy.
  Morgan Park Preparatory School.
  North Park Col. Acad.
  Starrett Sch. for Girls.
  Univ. High School.
Chicago Heights:
  Bloom Tp.
  Chrisman Tp.
Cicero:
  Sterling Morton Tp.
Clinton.
Collinsville Tp.
Crystal Lake.
Danville.
Decatur.
DeKalb Tp.
Des Plains:
  Maine Tp.
Dixon.
East Moline Tp.
Dundee.
DuQuoin Tp.
Dwight Tp.
East St. Louis.
Edwardsville.
Elgin:
  High School.
  Academy.
Elmhurst:
  Evang. Proseminar.
Eureka Tp.
Evanston:
  Tp. High School.
  Academy.
  Fairbury Tp.
Farmer City:
  Moore Tp.
Flora:
  Harter-Stanford Tp.
Freeport.
Galesburg.
Galva.
Geneseo Tp.
Geneva.
Gibson City:
  Drummer Tp.
Godfrey:
  Monticello Seminary.
Granite City.
Harrisburg Tp.
Harvey:
  Thornton Tp.
Herrin Tp.
Highland Park:
  Deerfield Tp.
Hinsdale Tp.
Hoopeston.
Jacksonville:
  High.
  Illinois Woman's College Academy.
  Whipple Acad.
Joliet Tp.
Kankakee.
Kenilworth:
  New Trier Tp.
Kewanee.
La Grange:
  Lyons Tp.
Lake Forest:
  Academy.
  Ferry Hall.

La Salle:
  La Salle-Peru Tp.
Lawrenceville Tp.
Lewistown.
Lexington.
Lincoln.
Lockport Tp.
Macomb:
  Acad. Dept. of Normal School.
Marion Tp.
Marshall Tp.
Mattoon.
Maywood:
  Proviso Tp.
Moline.
Morris.
Morrison.
Mount Carroll:
  Frances Shimer Sch.
Mount Vernon Tp.
Murphysboro Tp.
Naperville:
  High School.
  North W. Col. Acad.
Newman Tp.
Normal:
  High School.
  Normal Univ. H. Sch.
Oak Park:
  Oak River and River Forest Tp.
Olney Tp.
Onarga:
  Grand Prairie Sem.
Ottawa Tp.
Palestine Tp.
Pana Tp.
Paris.
Paxton.
Pekin.
Peoria:
  Bradley Poly. Inst.
  Central.
  Manual Training.
Petersburg.
Polo.
Pontiac Tp.
Princeton Tp.
Quincy.
Riverside—Brookfield.
Robinson Tp.
Rochelle.
Rockford.
Rock Island:
  High School
  Augustana Acad.
Sidell Tp.
Spring Valley:
  Hall Tp.
St. Charles.
Savanna Tp.
Shelbyville.
Springfield.
Sterling Tp.
Streator Tp.
Sullivan Tp.
Sycamore.
Taylorville Tp.
Tuscola.
Urbana.
Watseka.
Waukegon Tp.
West Chicago.
Wheaton:
  High School.
  Academy.
Woodstock.

INDIANA.

Alexandria.
Anderson.
Attica.
Bedford.
Bloomington.
Bluffton.
Brazil.
Bremen.
Clinton.
Columbia City.
Columbus.
Connersville:
  High School.
  Elmhurst School.
Crawfordsville.
Crown Point.
Culver Military Acad.
Danville.
Decatur.
Delphi.
East Chicago.
Elkhart.
Evansville.
Fort Wayne.
Frankfort.
Franklin.
Gary:
  Emerson.
  Froebel.
Goshen.
Hammond.
Hartford City.
Howe School.
Huntington.
Indianapolis:
  Manual Training.
  Shortridge.
  Technical.
Jeffersonville.
Kendallville.
Kokomo.
Lafayette.
La Grange.
La Porte.
Lawrenceburg.
Ligonier.
Logansport.
Madison.
Marion.
Martinsville.
Michigan City.
Mishawaka.
Monticello.
Mount Vernon.
Muncie.
New Albany.
New Castle.
Noblesville.
North Manchester.
Pendleton Consolidated.
Peru.
Plymouth.
Princeton.
Rensselaer.
Richmond.
Rochester.
Rockport.
Rushville.
Salem.
Shelbyville.
Sheridan.
Shields.
South Bend.
St. Joseph Col. H. S.
Sullivan.

- Terre Haute:
  - Garfield.
  - Normal Training.
  - Wiley.
- Union City.
- Valparaiso.
- Vincennes.
- Wabash.
- Washington.
- West Lafayette.
- Whiting.
- Winchester.

IOWA.

- Albia.
- Algona.
- Ames.
- Anamosa.
- Audubon.
- Bedford.
- Belle Plaine.
- Boone.
- Burlington.
- Carroll.
- Cedar Falls:
  - High School.
  - Training School.
- Cedar Rapids.
- Centerville.
- Charles City.
- Cherokee.
- Clarinda.
- Clarion.
- Clinton.
- Colfax.
- Corning.
- Corydon.
- Council Bluffs.
- Cresco.
- Creston.
- Davenport.
- Decorah.
- Denison.
- Des Moines:
  - East.
  - North.
  - West.
- Dubuque.
- Eagle Grove.
- Eldora.
- Elkader.
- Emmetsburg.
- Fairfield.
- Fort Dodge.
- Fort Madison.
- Grinnell.
- Hampton.
- Independence.
- Indianola.
- Iowa City.
- Iowa Falls
- Keokuk.
- Le Mars.
- Logan.
- Lyons.
- Manchester.
- Maquoketa.
- Marengo.
- Marion.
- Marshalltown.
- Mason City.
- Missouri Valley.
- Monticello.
- Mount Pleasant.
- Muscatine.
- Newton.
- Onawa.
- Osage.
- Oskaloosa:
  - High School.
  - Penn. Coll. Acad.
- Ottumwa.
- Sheldon.
- Sibley.
- Sioux City.
- Spencer.
- Spirit Lake.
- Storm Lake.
- Villesca.
- Vinton.
- Washington.
- Waterloo:
  - East.
  - West.
- Waverly.
- Webster City.
- West Liberty.

KANSAS.

- Abilene.
- Alma.
- Argentine.
- Arkansas City.
- Atchison.
- Baldwin:
  - Baker Academy.
- Burlington.
- Chanute.
- Chapman:
  - Dickinson Co.
- Cherryvale.
- Clay Center:
  - Clay Co.
- Colby:
  - Thomas Co. High.
- Columbus:
  - Cherokee Co.
- Concordia.
- Dodge City.
- Effingham:
  - Atchison Co. High.
- El Dorado.
- Ellsworth.
- Emporia:
  - High.
  - Normal Train. High.
- Eskridge.
- Eureka.
- Fort Scott.
- Garden City.
- Garnett.
- Great Bend.
- Herrington.
- Hiawatha.
- Hoisington.
- Horton.
- Humboldt.
- Hutchinson.
- Independence:
  - Montgomery Co.
- Iola.
- Junction City.
- Kansas City:
  - Central.
  - Sumner.
- Kingman.
- Kinsley.

- Lawrence.
- Leavenworth.
- Manhattan.
- Mankato.
- Marion.
- Marysville.
- McPherson.
- Minneapolis.
- Neodesha.
- Newton:
  - Bethel Academy.
  - High School.
- Nickerson:
  - Reno Co.
- Olathe.
- Ottawa:
  - Univ. Academy.
- Paola.
- Parsons.
- Pittsburg.
- Pratt.
- Rosedale.
- Sabetha.
- Salina.
- Seneca.
- Stafford.
- Sterling.
- St. John.
- Topeka:
  - Bethany Col. Acad.
  - High School
  - Washburn Coll. Ac.
- Wakeeny:
  - Trego Co.
- Wamego.
- Washington.
- Wellington:
  - Sumner Co.
- Wichita.
- Winfield.
- Yates Center.

MICHIGAN.

- Adrian.
- Albion.
- Alma.
- Alpena.
- Ann Arbor.
- Battle Creek.
- Bay City:
  - East.
  - West.
- Belding.
- Benton Harbor.
- Benzonia Acad.
- Bessemer.
- Big Rapids:
  - High School.
  - Ferris Institute.
- Birmingham.
- Boyne City.
- Cadillac.
- Calumet.
- Charlevoix.
- Charlotte.
- Cheboygan.
- Chelsea.
- Coldwater.
- Croswell.
- Crystal Falls.
- Detroit:
  - Cass.
  - Central.
  - Eastern.
  - Liggett.
  - Nordstrom.
  - Northwestern.
  - New University.
  - Univ. of Detroit Prep.
  - Western.
- llar Bay.
- Dowagiac.
- Eaton Rapids.
- East Jordan.
- Escanaba.
- Evart.
- Flint.
- Fremont.
- Gladstone.
- Grande Ledge.
- Grand Rapids:
  - Central.
  - Calvin College Prep.
  - South.
  - Union.
- Grand Haven.
- Greenville.
- Hancock.
- Harbor Springs.
- Hart.
- Hastings.
- Highland Park.
- Hillsdale.
- Holland.
- Houghton.
- Howell.
- Hudson.
- Ionia.
- Iron Mountain.
- Iron River.
- Ironwood.
- Ishpeming.
- Ithaca.
- Jackson.
- Kalamazoo:
  - High School.
  - Normal High.
- Lake Linden.
- Lansing.
- Lapeer.
- Lowell.
- Ludington.
- Manistec.
- Manistique.
- Marquette.
- Marshall.
- Mason.
- Menominee.
- Midland.
- Monroe.
- Munising.
- Muskegon.
- Mt. Clemens.
- Mt. Pleasant.
- Negaunee.
- Newberry.
- Norway.
- Ontonagon.
- Otsego.
- Owosso.
- Painesdale.
- Paw Paw.
- Petoskey.
- Pontiac.
- Port Huron.
- Portland.
- Plymouth.
- Reed City.
- River Rouge.
- Royal Oak.
- Saginaw:
  - East.
  - Arthur Hill.
- Sault Ste. Marie.
- Shelby.
- South Grand Rapids.
- South Haven.

St. Johns.
St. Joseph.
St. Louis.
Three Rivers.
Traverse City.
Wakefield
Wayne.
Williamston.
Wyandotte.
Ypsilanti.
Zeeland.

MINNESOTA.

Albert Lea.
Alexandria.
Anoka.
Austin.
Bemidji.
Biwabik.
Blue Earth.
Brainerd.
Buhl.
Canby.
Chisholm.
Cloquet.
Coleraine.
Crookston.
Duluth:
  Central.
  Robert E. Denfield.
East Grand Forks.
Ely.
Eveleth.
Fairmont.
Faribault.
Fergus Falls.
Gilbert.
Glencoe.
Glenwood.
Grand Rapids.
Hastings.
Hector.
Hibbing.
Hopkins.
Hutchinson.
Jackson.
Lake City.
Litchfield.
Little Falls.
Luverne.
Mankato.
Marshall.
Minneapolis:
  Central.
  East.
  North.
  South.
  West.
  Univ. High School.
Montevideo.
Moorhead.
Morris.
New Ulm.
Northfield.
Owatonna:
  High School.
Park Rapids.
Pipestone.
Red Wing.
Redwood Falls.
Rochester.
St. Cloud.
St. James.
St. Paul:
  Bethel Acad.
  Central.
  Durham Hall.
  Humboldt.
  John A. Johnson.
  Mechanic Arts.
St. Peter.
Sauk Center.
Sleepy Eye.
South St. Paul.
Spring Valley.
Staples.
Stillwater.
Thief River Falls.
Two Harbors.
Virginia.
Wadena.
Waseca.
Wells.
Willmar.
Windom.
Winona.
Worthington.

MISSOURI.

Bethany.
Boonville:
  Kemper Military Sch.
Butler.
Carrollton.
Carthage.
Charleston.
Chillicothe.
Clayton.
Columbia:
  High School.
  Christian Coll. Acad.
  Stephens Coll. Acad.
Ferguson.
Fredericktown.
Fulton:
  High School.
  Synodical Coll. Acad.
  Wm. Woods Col. Acad.
Hannibal.
Higginsville.
Independence.
Jefferson City:
  Ernst Simonsen.
Joplin.
Kansas City:
  Central.
  Manual Train.
  Northeast.
  Polytechnic Inst.
  Westport.
Kennett.
Kirkwood.
Lamar.
Lebanon.
Lexington:
  High School.
Lincoln.
Macon.
Maplewood.
Marshall.
Maryville.
Mexico:
  High School.
  High School Dept. Hardin College.

- Nevada:
  - High School.
- Paris.
- Poplar Bluff.
- St. Charles:
  - High School.
  - Lindenwood Acad.
- St. Joseph:
  - Central.
  - Benton.
- St. Louis:
  - Central.
  - Grover Cleveland.
  - McKinley.
  - Frank Louis Soldan.
  - Sumner.
  - Yeatman.
  - Hosmer Hall.
  - Lenox Hall.
  - Smith Academy.
  - The Principia.
- Savannah.
- Sedalia.
- Shelbina.
- Trenton.
- Vandalia.
- Webb City.
- Webster Groves.
- Wellston.
- West Plains.

MONTANA.

- Anaconda.
- Big Timber:
  - Sweet Grass Co. H. S.
- Billings.
- Bozeman:
  - Gallatin Co. H. S.
- Butte.
- Chinook.
- Chouteau:
  - Teton Co. H. S.
- Columbus.
- Deer Lodge:
  - Powell Co. H. S.
- Dillon:
  - Beaverhead Co. H. S.
- Forsyth.
- Fort Benton:
  - Chouteau Co. H. S.
- Glasgow.
- Glendive:
  - Dawson Co. H. S.
- Great Falls.
- Hamilton.
- Havre.
- Helena.
- Kalispell:
  - Flathead Co. H. S.
- Lewistown:
  - Fergus Co. H. S.
- Livingston:
  - Park Co. H. S.
- Miles City:
  - Custer Co. H. S.
- Missoula:
  - Missoula Co. H. S.
- Philipsburg:
  - Granite Co. H. S.
- Red Lodge:
  - Carbon Co. H. S.

NEBRASKA.

- Albion.
- Alliance.
- Alma.
- Ashland.
- Auburn.
- Aurora.
- Beatrice.
- Benson.
- Blair.
- Broken Row.
- Central City.
- Columbus.
- Crete.
- Fairbury.
- Fairfield.
- Falls City.
- Franklin Academy.
- Fremont.
- Friend.
- Fullerton.
- Geneva.
- Gothenburg.
- Grand Island.
- Harvard.
- Hastings:
  - High School.
  - Hastings Academy.
- Havelock.
- Holdrege.
- Humboldt.
- Kearney.
- Kimball Co.
- Lexington.
- Lincoln:
  - High.
  - Teachers Coll. High.
- McCook.
- Madison.
- Minden.
- Nebraska City.
- Nelson.
- Norfolk.
- North Bend.
- North Platte.
- Omaha:
  - High.
  - Brownell Hall.
  - Creighton Academy.
- Omaha—Continued.
  - South High.
- Pawnee.
- Ravenna.
- Red Cloud.
- Schuyler.
- Scottsbluff.
- Seward.
- Shelton.
- Sidney.
- Superior.
- Tecumseh.
- Tekamah.
- University Place:
  - High.
  - Wesleyan Academy.
- Wahoo.
- Wayne.
- Wisner.
- York:
  - High.
  - Academy.

NEW MEXICO.

Albuquerque.
Carlsbad.
East Las Vegas.
Las Vegas:
  Normal Univ. Prep. S.
Roswell:
  Military Institute.
Santa Fe.
Silver City:
  State Normal Prep.
State College:
  Agri. Col. Prep.

NORTH DAKOTA.

Agricultural College:
  Agr. and Man. Tr.
    High School.
Beach:
  Agricultural.
Bismarck.
Bottineau.
Cando.
Carrington:
  Agricultural.
Casselton.
Cavalier.
Cooperstown.
Devils Lake.
Dickinson.
Edgeley.
Fargo.
Grafton:
  Agricultural.
Grand Forks.
Hope:
Jamestown.
Kenmare.
Lakota.
La Moure:
  Agricultural.
Langdon.
Larimore.
Lisbon.
Mandan.
Minot.
New Rockford.
Oakes.
Park River.
Rugby.
University:
  Model High School.
Wahpeton.
Williston.
Valley City.

OHIO.

Akron:
  Central.
  South.
  West.
Alliance.
Amherst.
Ashland.
Ashtabula Harbor.
Barberton.
Bellaire.
Bellefontaine.
Bellevue.
Berea.
Bluffton
Bowling Green.
Bridgeport.
Bryan.
Bucyrus.
Cambridge.
Canton.
Canal Winchester.
Celina.
Chardon.
Chicago Junction
Chillicothe.
Cincinnati:
  Coll. Prep. Girls.
  Franklin.
  Hartwell.
Cincinnati—Continued.
  Hughes.
  Madisonville.
  Pleasant Ridge
  St. Xavier.
  Uni. School.
  Walnut Hills.
  Woodward.
Circleville.
Cleveland:
  Central.
  East.
  East Tech.
  Glenville.
  Lincoln.
  South.
  West.
  West Tech.
  Univ. School.
  Cleveland Hts.
  Columbiana.
Columbus:
  Ac. of Capital Univ.
  East.
  North.
  South.
  West.
  Sch. for Girls.
Conneaut.
Coshocton.
Covington.
Crestline.
Cuyahoga Falls.
Danville, Buckeye City
Dayton:
  Steele.
  Stivers Man. Tr.
  St. Marys Coll. Acad.
Defiance.
De. Graff.
Delaware.
Delphos.
Dennison.
Dover.
E. Cleveland.
E. Liverpool.
Eaton.
Elyria.
Findlay.
Fostoria.
Fredericktown.
Fremont.
Galion.
Gallipolis.
Geneva.
Gibsonburg.
Girard.
Grandview Heights.

The following tables reveal the general situation among the schools of the North Central territory:

TABLE 1.—*Growth in the number of accredited schools of all types since 1904.*

State.	1917	1916	1915	1914	1909	1904
Arizona	7	2	0	0	0	0
Colorado	37	38	39	36	31	9
Illinois	163	163	153	149	97	34
Indiana	83	79	72	63	42	7
Iowa	79	72	69	65	50	11
Kansas	74	73	74	68	17	0
Michigan	119	112	99	99	74	28
Minnesota	80	85	75	73	44	6
Missouri	65	61	59	52	28	9
Montana	25	23	20	16	1	0
Nebraska	64	67	59	55	24	4
New Mexico	8	0	0	0	0	0
North Dakota	33	33	32	28	5	0
Ohio	175	177	161	156	93	26
Oklahoma	21	20	19	21	2	0
South Dakota	25	23	22	19	15	0
Wisconsin	101	96	91	90	71	26
Wyoming	6	5	4	3	1	0
Total	1,165	1,129	1,048	993	595	160

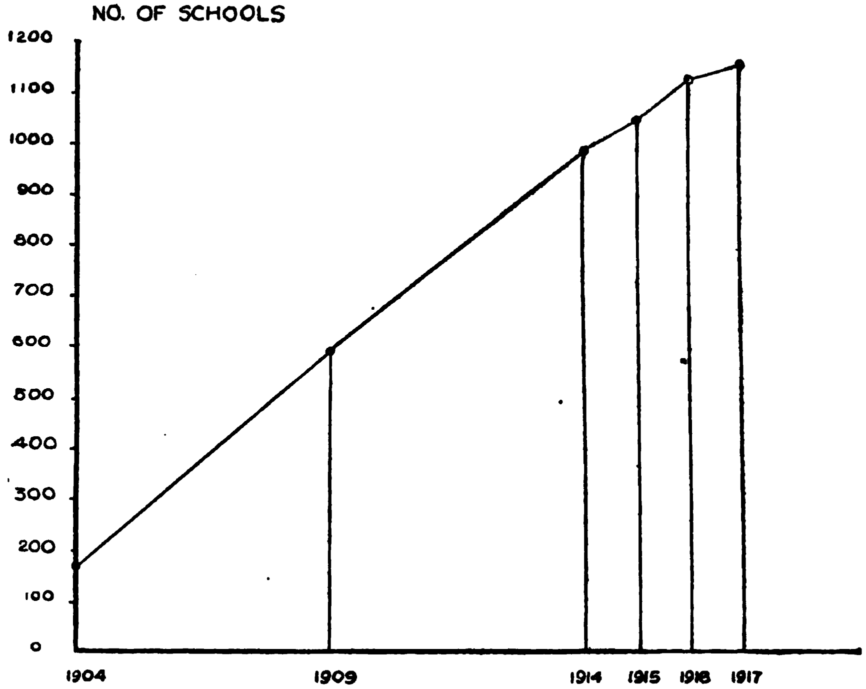

CHART I.—Growth of accredited schools since 1904.

CONSTITUENCY OF THE LIST OF SCHOOLS.

Table 3 reveals the constituency of the North Central accredited list of schools, as studied. The table shows that the records of 46 accredited schools are missing from the reports, but that of the

WISCONSIN

- Antigo.
- Appleton.
- Ashland.
- Baraboo.
- Beaver Dam:
  - High School.
  - Wayland Academy.
- Beloit.
- Berlin.
- Burlington.
- Chilton.
- Chippewa Falls.
- Columbus.
- Delafield:
  - St. Johns Mil. Acad.
- Delavan.
- Dodgeville.
- Eau Claire.
- Edgerton.
- Elkhorn.
- Ellsworth.
- Elroy.
- Evansville.
- Fennimore.
- Fond du Lac.
- Fort Atkinson.
- Grand Rapids.
- Green Bay:
  - East.
  - West.
- Hartford.
- Hudson.
- Hurley.
- Janesville.
- Jefferson.
- Kaukauna.
- Kenosha.
- La Crosse.
- Lake Geneva:
  - High.
  - Northwestern Mil. Acad.
- Lake Mills.
- Lancaster.
- Lodi.
- Madison:
  - High School.
  - Wisconsin H. Sch.
- Manitowoc.
- Marinette.
- Marshfield.
- Medford.
- Menasha.
- Menomonie.
- Merrill.
- Milwaukee:
  - East.
  - North.
  - South.
  - Washington.
  - West.
  - Milwaukee-Downer.
- Mineral Point.
- Mondovi.
- Monroe.
- Neenah.
- Neilsville.
- New London.
- New Richmond.
- Oconomowoc.
- Oconto.
- Oshkosh.
- Park Falls.
- Plateville.
- Plymouth.
- Portage.
- Port Washington.
- Racine.
- Racine College G. S.
- Reedsburg.
- Rhinelander.
- Rice Lake.
- Richland Center.
- Ripon.
- River Falls.
- Sheboygan.
- Sinsinawa:
  - St. Clara Acad.
- South Milwaukee.
- Sparta.
- Stanley.
- Stevens Point.
- Stoughton.
- Sturgeon Bay.
- Superior:
  - Central.
  - Nelson Dewey.
- Tomah.
- Tomahawk.
- Viroqua.
- Washburn.
- Watertown.
- Waukesha.
- Waupauca.
- Waupun.
- Wausau.
- Wauwatosa.
- West Allis.
- West Bend.
- Whitewater.

WYOMING.

- Casper:
  - Natrona Co. High.
- Cheyenne.
- Laramie:
  - High School.
  - University High
- Rock Springs.
- Sheridian.

Boys, 176,716, or an average of 157 per school; girls, 213,149, or an average of 190 per school; grand total, 389,865, or an average of 348 per school.

In the study made in 1914 (Judd-Counts study, p. 37) the total enrollment in the accredited schools for that year was 288,693, distributed among 918 schools. This is an average of 314 per school. Within three years, therefore, the increase in the enrollment among the association's accredited schools has been 101,172, or an average, per school of 34 pupils.

It is interesting to note, too, the extent to which the number of girls exceeds the number of boys in the schools, being an excess of 36,433, or an average of 33 per school. In no State does the number of boys equal the number of girls. The average excess per school of girls over boys is as follows:

TABLE 4.—*Average excess per school of girls over boys enrolled in the accredited schools.*

Arizona	19	Michigan	19	North Dakota	22
Colorado	40	Minnesota	48	Ohio	18
Illinois	29	Missouri	61	South Dakota	31
Indiana	21	Montana	38	Wisconsin	29
Iowa	47	Nebraska	29	Wyoming	36
Kansas	62	New Mexico	24		

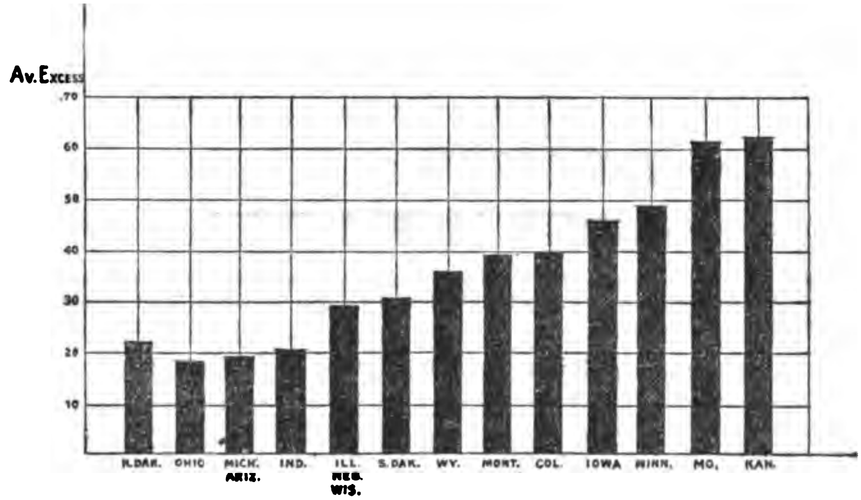

CHART IV.—Average excess, per school, of girls over boys.

Just why Kansas (with 62) and Missouri (with 61) should have on the average per school such a large excess of girls over boys is not obvious.

Further, the facts seem to indicate that in Ohio a larger number of boys, relatively speaking, pursue a secondary education than in any other North Central Association State. Next to Ohio stand in order Michigan and Arizona, Indiana, North Dakota, and New Mexico with an excess of girls fewer than 25 per school. Excepting Arizona and New Mexico, which have been admitted to the North Central Association within the last two years and have small lists of accredited schools, and excepting North Dakota, the facts seem to indicate that in the States lying in the eastern portion of the association territory boys attend the secondary schools in much larger numbers, relatively speaking, than in the more western States. It is regrettable that data respecting this topic have not been gathered previously. As the facts stand, no comparisons with other years is possible here.

Table 5 reveals the distribution of pupils among the four years or classes of the high school. The totals are as follows:[1]

TABLE 5.—*Pupil distribution by classes.*

Years.	Number of pupils.	Average per school.	Per cent of entire enrollment.	Per cent of loss.
First year	142,668	127	37.72	....
Second year	102,438	92	27.08	10.64
Third year	74,057	66	19.58	7.50
Fourth year	59,038	53	15.61	3.97

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[1] Some discrepancies exist between the totals given here and in Table 8. These are due to the inclusion in the former case of special and irregular students.

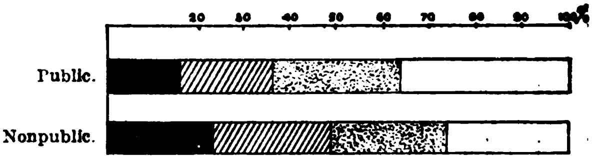

CHART V.—Distribution of pupils by classes, in percentages. Dark sections indicate fourth-year students; shaded sections, third-year students; dotted sections, second-year students; and light sections, first-year students.

TABLE 6.—*Enrollment compared with that of Judd-Counts study.*

Years.	Judd-Counts study.	Present study.	Change.
	Per cent.	*Per cent.*	*Per cent.*
First year	38.1	37.72	−0.38
Second year	26.5	27.08	+ .58
Third year	19.5	19.58	+ .08
Fourth year	15.9	15.61	− .29

These facts are striking. In three years (1914 to 1917) there has been less than 1 per cent change in the percentages of distribution.

TABLE 7.—*Total enrollment by States, and the average enrollment per school of all the schools accredited, public and nonpublic.*

State.	Number of schools.	Boys.	Girls.	Total.	Average.
Arizona	6	836	947	1,783	297
Colorado	37	5,756	7,248	13,004	352
Illinois	162	34,794	39,586	74,380	459
Indiana	83	14,591	16,383	30.974	373
Iowa	78	11,139	14,845	26,034	334
Kansas	73	8,738	13,273	22,011	302
Michigan	119	20,256	22,529	42,785	360
Minnesota	69	11,105	14,410	25,515	370
Missouri	63	11,370	15,152	26,522	421
Montana	25	2,664	3,615	6,279	251
Nebraska	64	6,036	7,891	13,927	218
New Mexico	4	241	336	577	144
North Dakota	32	1,863	2,668	4,531	141
Ohio	175	31,084	34,296	65,380	374
Oklahoma[1]	....	....	....	....	....
South Dakota	25	1,897	2,683	4,580	183
Wisconsin	99	13,878	16,688	30,566	309
Wyoming	5	418	599	1,017	203
Total	1,119	176,716	213,149	389,865	....
Average	....	157	190	348	....

[1] Data lacking.

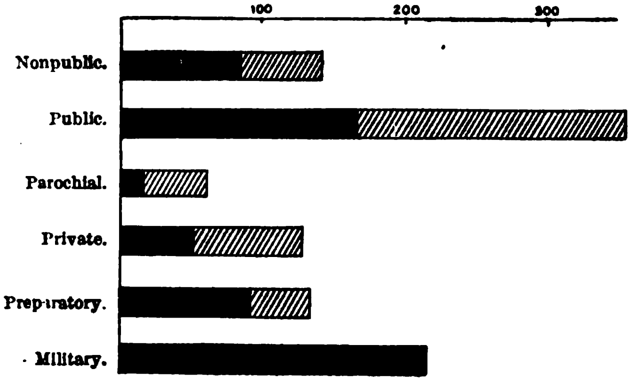

CHART VI.—Average enrollment of pupils in various types of schools. Dark sections indicate boys; shaded sections indicate girls.

TABLE 8.—*Total enrollment by States, and average enrollment per year (class) of all the schools accredited, public and nonpublic.*

State.	Fourth year.	Third year.	Second year.	First year.
Arizona	220	329	407	637
Colorado	1,962	2,416	3,885	4,305
Illinois	10,138	12,592	19,016	30,472
Indiana	5,152	6,127	8,146	11,133
Iowa	4,550	5,368	6,850	9,192
Kansas	3,729	4,339	6,251	7,376
Michigan	5,779	7,814	10,542	15,203
Minnesota	4,321	4,898	6,629	9,350
Missouri	3,890	4,807	6,846	10,211
Montana	995	1,247	1,673	2,480
Nebraska	2,500	2,980	3,707	5,196
New Mexico	93	128	181	175
North Dakota	798	909	1,120	1,667
Ohio	8,454	12,592	17,740	22,382
South Dakota	835	903	1,173	1,649
Wisconsin	5,450	6,393	7,994	10,876
Wyoming	166	215	278	364
Total	59,032	74,057	102,438	142,668
Average	53	66	92	127

PART II.—ACCREDITED PUBLIC SCHOOLS.

Part I of this study has dealt with data of *all* the schools accredited by the association. This was done in order to have comparable figures to contrast with certain earlier statistical studies of the association. In Part II, public schools only are considered. The subdivisions of this portion of the work are: Division A—Pupils; Division B—Teachers; Division C—Buildings and Equipment; Division D—The Program of Studies; and Division E—Miscellaneous Topics.

It was the original plan of the compilers of the data for this study to present detailed tables of the conditions in each of the three main types of public schools of our classification—for large, medium, and small schools— and then to offer a summarizing table for all schools combined. Such tables of details for each topic and for each type of school have been worked out with great care. Owing, however, to the present excessive cost of reproducing such numbers of tables the original project has had to be abandoned. For the most part, therefore, in the pages which follow, only summarizing tables will be presented.

DIVISION A—PUPILS.

Tables 9 and 10 show the enrollment of pupils by sexes and by classes, and give the average numbers per school and per year for the several States. From these tables it is seen that the girls outnumber the boys in the school by almost exactly 10 per cent, the total enrollment showing 55.2 per cent girls and 44.8 per cent boys. In like manner the tables show the distribution by classes to be as follows: First-year students (freshmen) 38.02 per cent, second-year students (sophomores) 27.15 per cent, third-year students (juniors) 19.42 per cent, and fourth-year students (seniors) 15.39 per cent.

The typical North Central public school, therefore, enrolls 365 pupils, of whom 164 are boys and 201 are girls. Moreover, within this school the distribution by years is: First-year pupils 137, second-year pupils 97, third-year pupils 70, and fourth-year pupils 55. The more detailed analyses further show that the typical school enrolls 6 pupils who are classified as special, irregular, or graduate students.

TABLE 9.—*Total enrollment per State and the average enrollment per school in the accredited public schools.*

State.	Number of schools accredited.	Boys enrolled.		Girls enrolled.		Boys and girls enrolled.	
		Number.	Average per school.	Number.	Average per school.	Number.	Average per school.
Arizona	6	836	139	947	158	1,783	297
Colorado	36	5,469	152	6,897	192	12,366	344
Illinois	135	32,674	242	37,971	281	70,645	523
Indiana	79	13,731	174	16,371	207	30,102	381
Iowa	76	11,083	146	14,711	194	25,794	339
Kansas	67	8,489	127	12,885	192	21,374	319
Michigan	112	19,159	171	21,816	195	40,975	366
Minnesota	67	11,050	165	14,235	212	25,285	377
Missouri	52	11,010	212	14,721	283	25,731	495
Montana	25	2,664	107	3,615	145	6,279	251
Nebraska	57	5,512	97	7,656	134	13,168	231
New Mexico	4	241	60	336	84	577	144
North Dakota	30	1,749	58	2,579	86	4,328	144
Ohio	165	29,984	182	34,003	206	63,987	388
South Dakota	24	1,897	79	2,615	109	4,512	188
Wisconsin	92	13,278	144	16,283	177	29,561	321
Wyoming	5	418	84	599	120	1,017	203
Total	1,032	169,244	164	208,240	201	377,484	365
Percentage		44.8		55.2			

TABLE 10.—*Total enrollment per State and the average enrollment per year (class) in the accredited public schools.*

State.	Fourth year.		Third year.		Second year.		First year.	
	Enrolled.	Average per class.	Enrolled.	Average per class.	Enrolled.	Average per class.	Enrolled.	Average per class.
Arizona	220	37	329	55	407	68	637	106
Colorado	1,916	53	2,287	70	3,624	101	4,118	114
Illinois	9,347	69	11,711	87	18,250	135	29,439	218
Indiana	4,968	63	5,902	74	7,986	101	10,920	138
Iowa	4,475	59	5,301	70	6,794	89	9,150	120
Kansas	3,562	53	4,216	63	6,031	90	7,296	109
Michigan	5,475	49	7,436	66	10,282	92	14,890	133
Minnesota	4,278	64	4,844	72	6,573	98	9,273	138
Missouri	3,681	71	4,633	89	6,646	128	10,040	193
Montana	995	20	1,247	50	1,673	67	2,480	99
Nebraska	2,315	41	2,803	49	3,547	62	4,957	87
New Mexico	93	23	128	32	181	45	175	44
North Dakota	733	24	865	29	1,083	36	1,610	54
Ohio	8,194	50	12,280	74	17,382	105	21,935	133
South Dakota	819	34	890	37	1,153	48	1,630	68
Wisconsin	5,259	57	6,179	67	7,735	84	10,621	115
Wyoming	166	33	215	43	278	56	364	73
Total	56,496	55	71,266	70	99,625	97	139,535	137
Percentage	15.39		19.42		27.15		38.02	

In the analyses of the detailed statistics of pupil enrollments arranged in accordance with the classification of large, medium, and small schools (the tables omitted from this publication), some peculiar but significant conditions are revealed. Tables 11 and 12 show the summaries of these findings, but do not seek to disclose the situations within the several States.

Table 11 shows that the large schools enroll a greater percentage of boys than do either the medium or small schools, whereas both of the smaller types of schools enroll greater percentages of girls than does the larger type of schools. These figures seem to indicate that in the smaller and medium sized cities and towns, drawing, as they do, many pupils from the rural districts, more girls are attracted to the schools than are boys. This fact may in turn be accounted for by reason of the possibly greater cultural ambitions of the girls of the country districts and of the small town when compared with the boys of these same localities, by the greater leisure at their command, by the pride of parents in having their daughters attend high school whether or not their sons can do so, or care to do so, and by the greater appeal to girls than to boys of the academic subjects in the typical program of studies. The last point may be stated thus. That the typical girl will accept the program of studies without complaint to a greater degree than will the typical boy.

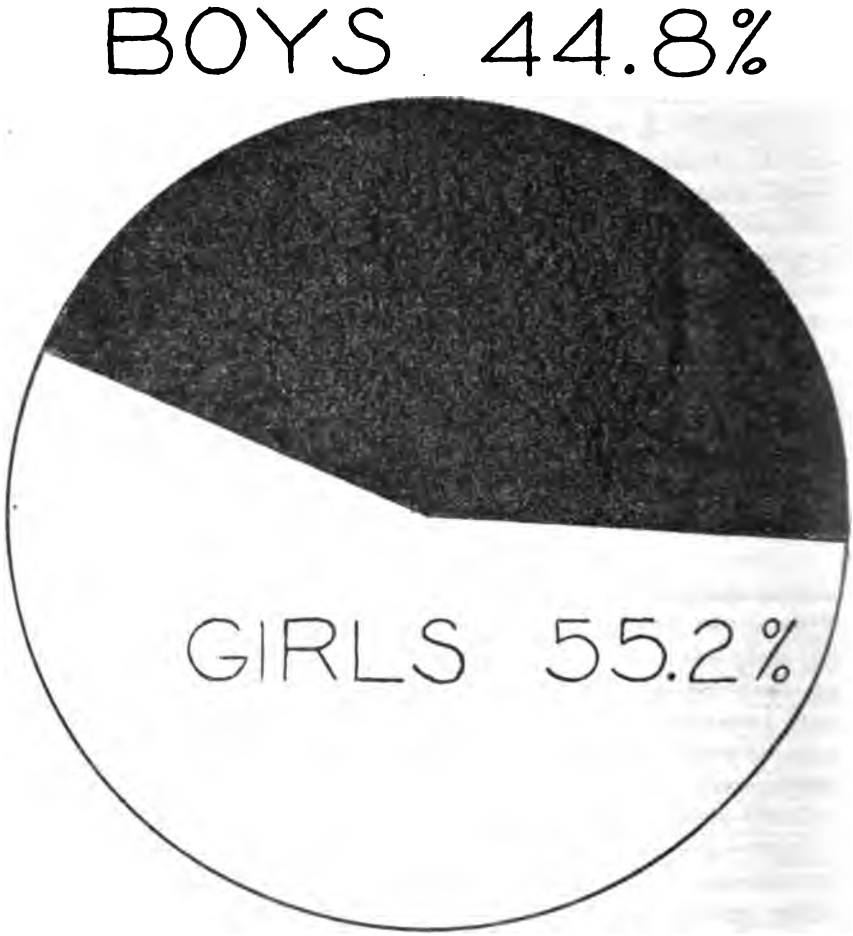

CHART VII.—Distribution of boys and girls in the accredited public schools.

It may be, of course, that the greater percentage of boys found in the large schools is due to the fact that in the cities of larger size more extensive and varied opportunities are afforded to secure quasi vocational and vocational training for boys than is afforded girls in the same school system or is afforded boys in the smaller school systems.

TABLE 11.—*Enrollment of pupils according to types of school.*

Type of school.	Number of schools.	Average size of school.	Average number of boys enrolled.	Per cent boys.	Average number of girls enrolled.	Per cent girls.
Large	234	899	417	46.4	482	53.6
Medium	559	251	108	43.0	143	57.0
Small	239	112	47	42.0	65	58.0
All types combined	1,032	365	164	44.8	201	55.2

Table 12 shows the distribution of pupils by classes within the several types of schools. The facts show clearly that a greater percentage of pupils (both boys and girls) remain throughout the third and fourth years of the medium and small schools than in the large schools. On the other hand, the percentage of first-year students in the large schools is noticeably greater than it is in either of the other two types of schools. The percentages of enrollment within the second year classes are nearly alike for all types of schools.

These facts seem to indicate that there is a greater persistence of school attendance in the medium and small places than in the large cities. Possibly the many social attractions outside the school in the large cities, together with the tendency in the cities for youths to aspire to economic independence at an early age, may explain the situation. It may, of course, mean that the schools of the larger places have produced a more adequate training for youths at an earlier age than is possible in the smaller type of school.

If the detailed data for the several States of the association territory were presented here,[1] it would be discovered that, omitting from consideration the eight distinctively nonurban States (namely, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, South Dakota, and Wyoming), over 40 per cent of the fourth-year classes, over 45 per cent of the third-year classes, and over 50 per cent of the second and first-year classes in the high schools of the association are receiving their instruction in the large schools. Correlatively, in the eight States mentioned above, the small schools enroll a relatively high percentage of the aggregate of the pupils in each of the four classes.

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[1] These facts are revealed in the working papers of this study, but as explained before these papers could not be published here in all their details.

The facts seem to indicate, therefore, that the large schools of the association are exerting their influence on a much greater proportionate number of pupils of all classes than are the medium and small schools, although there are fewer of these schools than there are either of the medium or small type. Since the facts are as they are, the query arises: Ought not the association (while not neglecting the schools of the medium and small types) to set its standards quite largely in accordance with the possibilities realizable by the large schools? Should not its discussions bear more frequently than they do upon the special problems of these large schools? Or might it not be feasible and desirable to recognize officially the three types of schools designated here and to set separate groups of standards appropriate to the three types? Is, in other words, the association in its formulations ahead or behind the practices of the majority of the large schools? If the latter, is its procedure thoroughly defensible? Should not the association be a great stimulating force for *all* schools, and exert leadership among each and every type of school with which it sustains accrediting relations?

TABLE 12.—*Distribution of pupils, by classes, within the three types of public schools.*

Type of school.	Fourth year.		Third year.		Second year.		First year.	
	Average number of pupils.	Per cent.	Average number of pupils.	Per cent.	Average number of pupils.	Per cent.	Average number of pupils.	Per cent.
Large	117	13.67	160	18.64	238	27.69	344	39.98
Medium	43	17.41	50	20.26	66	26.58	89	35.72
Small	20	17.82	24	20.84	29	26.02	40	35.27
All types combined	55	15.39	70	19.42	97	27.15	137	38.02

Table 13 shows how the accredited schools are distributed, in respect to enrollment, in the several States. Thus, Illinois, with 135 public schools accredited, has 34.07 per cent of these classified as large schools; 51.85 per cent as medium-sized schools; and 14.07 per cent as small schools. With the exception of Colorado, Illinois, Missouri, and Ohio, no State has 25 per cent of the accredited schools in the first or large group. On the other hand, no State except North Dakota has a medium-sized group that contains fewer than 25 per cent of the total number, the range being 23.33 per cent to 66.66 per cent. Eleven States have 50 per cent or more of their schools included in this (medium) division.

Again, it is made evident that the association, in most of the States, draws its greatest support, in point of number of accredited schools, from the moderate-sized schools, simply because there are more of this type in the majority of the States.

TABLE 13.—*Classification of schools, by States, under the three divisions, large, medium, small.*

State.	Total number schools.	Large.		Medium.		Small.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Arizona	6	1	16.66	4	66.66	1	16.66
Colorado	36	9	25.00	15	41.66	12	33.33
Illinois	135	46	34.07	70	51.85	19	14.07
Indiana	79	19	24.05	48	60.75	12	15.20
Iowa	76	17	22.36	46	60.52	13	17.11
Kansas	67	11	16.41	46	68.65	10	14.92
Michigan	112	25	22.32	64	57.14	23	20.52
Minnesota	67	12	17.91	42	62.68	13	19.41
Missouri	52	16	30.76	25	48.07	11	21.15
Montana	25	4	16.00	8	32.00	13	52.00
Nebraska	57	2	3.51	36	63.15	19	33.33
New Mexico	4	0	.00	1	25.00	3	75.00
North Dakota	30	2	6.66	7	23.33	21	70.01
Ohio	165	49	29.69	83	50.30	33	20.01
South Dakota	24	1	4.16	12	50.00	11	45.83
Wisconsin	92	20	21.73	50	54.34	22	23.92
Wyoming	5	0	.00	2	40.00	3	60.00

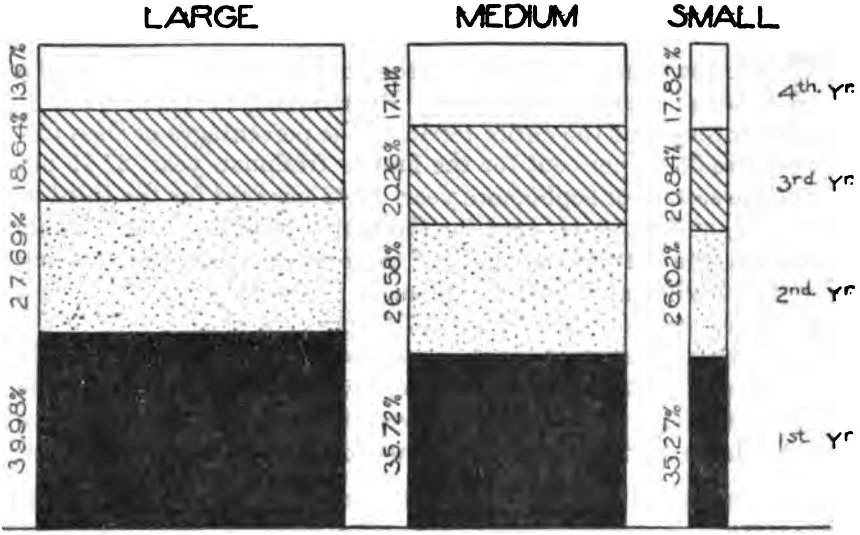

CHART VIII.—Distribution of pupils by classes in the three types of public schools.

Table 14 shows the percentages of distribution of pupils enrolled in the three types of schools in the several States. Thus Colorado, with 36 accredited public schools, enrolling 12,366 pupils, has 57.99 per cent of these attending the large schools, 30.56 per cent attending the medium-sized schools, and 11.06 per cent attending the small schools. Taking the entire list of the accredited public schools, it is observed that the large schools enroll 55.75 per cent of the total number of pupils, the medium schools 37.19 per cent, and the small schools 7.05 per cent. Thus again it is seen that the North Central Association is directly influencing, to the greatest extent, the education of the youths in the larger cities and towns.

TABLE 14.—*Percentages of pupils, by States, enrolled in the several types of schools, large. medium, small.*

State.	Number of schools.	Total enrollment.	Per cent enrolled in large schools	Per cent enrolled in medium schools.	Per cent enrolled in small schools.
Arizona	6	1,783	44.86	47.73	7.41
Colorado	36	12,366	57.99	30.56	11.06
Illinois	135	70,645	71.12	25.65	3.22
Indiana	79	30,102	53.49	43.49	3.02
Iowa	76	25,794	49.25	43.82	6.91
Kansas	67	21,374	39.29	53.75	6.95
Michigan	112	40,975	53.14	40.48	6.37
Minnesota	67	25,285	50.26	44.07	5.66
Missouri	52	25,231	70.59	24.35	5.06
Montana	25	6,279	39.35	39.83	20.82
Nebraska	57	13,168	25.40	59.89	14.71
New Mexico	4	577	.00	62.05	37.95
North Dakota	30	4,328	22.87	30.66	46.47
Ohio	165	63,987	62.11	32.48	5.41
South Dakota	24	4,512	11.63	62.94	25.43
Wisconsin	92	29,561	51.23	37.74	11.03
Wyoming	5	1,017	.00	60.18	39.82
Total	1,032	377,484			
Percentage			55.75	37.19	7.05

Table 15 shows the distribution of the pupils, by classes, among the several types of accredited schools. By referring to Table 10 it is seen that throughout the entire territory the percentages of class distribution are 38.02 per cent for the first or freshman year, 27.15 per cent for the second or sophomore year, 19.42 per cent for the third or junior year, and 15.39 per cent for the fourth or senior year. Table 16 shows to what extent the pupils of these several classes are coming under the peculiar and unique influences of the large, medium, and small schools, respectively. Thus, 57.68 per cent of all pupils in the first or freshman year in the high schools were, in 1916–17, enrolled in large schools; 35.47 per cent were enjoying the privileges of the medium schools; and 6.84 per cent were in the small schools. The table should be read in a similar manner for each of the other classes.

TABLE 15.—*Distribution of pupils, by classes or years, among the several types of accredited schools.*

Type of school.	Total number of pupils enrolled by years.				Percentage of pupils enrolled by years.			
	First.	Second.	Third.	Fourth.	First.	Second.	Third.	Fourth.
Large	80,484	55,747	37,543	27,629	57.68	55.95	52.68	48.72
Medium	49,498	36,830	28,078	24,128	35.47	36.96	39.39	42.70
Small	9,553	7,048	5,645	4,839	6.84	7.07	7.92	8.56

When the facts are considered in reference to types of schools, it is discovered that the large schools have a relatively high ratio of pupils to teachers, whereas the small schools have a relatively low ratio. Thus, in the large schools only 2.13 per cent have a ratio of pupils to teachers of less than 16 to 1, whereas 8.22 per cent of the medium schools have such a ratio, and, most remarkable, 39.74 per cent of the small schools have such a ratio. At the other extreme, more than 21 per cent of the large schools have a ratio of pupils to teachers in excess of 25 to 1, whereas in the small schools the similar ratio is found in only 1.67 per cent of the schools.

These facts seem to indicate that the smaller schools provide a more adequate number of teachers to carry on their school work than do the larger schools. This conclusion does not, however, indicate whether or not the teachers of the smaller school systems have, in the aggregate, less school work to perform than have the teachers of the other types of schools. What is shown is that they are, proportionately speaking, responsible for the development of fewer pupils per teacher, but whether the facilities with which to accomplish this training and the length of time which they are expected to devote to school work each day are likewise more favorable to the teachers of the smaller schools are items not revealed here.

Table 16 shows the average number of pupils per teacher as based on the number of teachers and pupils belonging to the schools October, 1916. The table should be read as follows: Arizona with 6 accredited schools had 3 schools in which the ratio of teachers to pupils was 1 to 15 or less, 2 schools in which the ratio was 1 to something between 16 and 20, and 1 school in which the ratio was 1 to something between 21 and 25. So with each of the other States. However, the totals and the percentages are the most significant parts of this table. Taking the entire North Central public schools as a whole, the median ratio of teachers to pupils is 1 to something between 16 and 25; over 40 per cent of the schools having an enrollment of between 16 and 20 pupils per teacher, and approximately 37 per cent having an enrollment of between 21 and 25 pupils per teacher.

TABLE 16.—*Ratios of teachers to pupils enrolled.*

State.	Number schools reporting.	Schools having ratio of one teacher to—				
		15 pupils or fewer.	16 to 20 pupils.	21 to 25 pupils.	26 to 30 pupils.	Over 30 pupils.
Arizona	6	3	2	1	0	0
Colorado	36	6	10	20	0	0
Illinois	135	13	60	39	17	6
Indiana	79	8	38	31	2	0
Iowa	76	8	31	32	5	0
Kansas	67	14	29	21	4	0
Michigan	112	12	46	48	6	0
Minnesota	67	18	35	11	3	0
Missouri	52	1	20	23	6	2
Montana	25	11	9	5	0	0
Nebraska	57	2	32	19	4	0
New Mexico	4	2	2	0	0	0
North Dakota	30	19	9	2	0	0
Ohio	165	7	58	89	31	0
South Dakota	24	8	14	2	0	0
Wisconsin	92	13	38	36	5	0
Wyoming	5	1	2	2	0	0
Total	1,032	146	415	381	82	8
Percentage		14.05	40.21	36.91	7.75	0.77

uating class. Hence the percentages are but close approximations to the true percentages, since the enrollments on the schools show in general a slight increase each year. Since, however, the percentages given here are based on the larger enrollment of the year following graduation and not the enrollment of the current year of graduation, the percentages are too small rather than too large. Using the figures as they are, it is observed that approximately 14 per cent of all pupils in the North Central Association high schools graduate from those schools each year.

TABLE 17.—*Number of graduates in 1916, and the average number per school.*

State.	Total graduates.	Average per school.	State.	Total graduates.	Average per school.
Arizona	196	33	Montana	778	31
Colorado	1,796	50	Nebraska	2,294	40
Illinois	8,062	60	New Mexico	73	18
Indiana	4,628	67	North Dakota	632	21
Iowa	3,922	52	Ohio	9,178	56
Kansas	3,068	46	South Dakota	782	33
Michigan	5,621	50	Wisconsin	4,467	49
Minnesota	3,699	55	Wyoming	141	28
Missouri	3,079	59			
			Total	52,416	51

TABLE 18.—*Number of graduates in 1916 by type of school.*

Schools.	Boys.		Girls.		Total.	Per cent of all.	Per cent of own enrollment.
	Number.	Per cent.	Number.	Per cent.			
Large schools	11,479	42.80	15,103	57.20	26,582	50.71	12.63
Medium schools	8,663	40.56	12,692	59.44	21,355	40.74	15.21
Small schools	1,799	40.16	2,680	59.84	4,479	8.54	16.82
Total	21,941	41.85	30,475	58.15	52,416	100.00	13.88

NUMBER ENTERING COLLEGE.

Table 19 shows the number and percentages of graduates in 1916 who in the fall of that same year entered higher institutions of learning.

When it is kept in mind that high-school graduates frequently and in large numbers defer entrance to college beyond the autumn immediately following graduation, the figures revealed by Table 19 are truly remarkable. In every State except Nebraska more than one-third of the graduates of the class of 1916 had within four months entered colleges and other institutions of higher learning.

Moreover, there is but little difference to be noted among the several types of schools. Each one is, to a large degree, a preparatory school for colleges. There are, however, a few conspicuous extremes. Arizona with only 6 accredited schools makes a showing both here and in other tables which can scarcely be regarded as characteristic of all the schools in the State. The 13 small schools of Minnesota really have the most remarkable records, since 242, or 89.6 per cent, of the 270 pupils graduating in 1916 entered college immediately.

When a total of 52,416 students graduate from North Central public schools in one year, and of these 20,201, or 38.5 per cent, enter institutions of higher learning, it augurs well for the continuance of these agencies. It likewise shows the futility (if it were anywhere desired), of seeking to administer institutions of higher learning without inviting and securing the cooperation of the vast army of secondary school teachers and administrators themselves; certainly so in respect to problems of mutual concern, such as curriculum offerings and admission prescriptions.

Using the enrollment in the schools in the fall of 1916 as a base (the fall following the time when the lists of graduates included here were computed), the results show that 5.35 per cent of the entire enrollment in the North Central Association schools annually graduate and enter colleges and universities *immediately*.

TABLE 19.—*Number of pupils graduating in 1916 who in the fall of 1916 entered institutions of higher learning.*

State.	Graduates in 1916.	Entering college in fall of 1916.	Per cent going to college.	State.	Graduates in 1916.	Entering college in fall of 1916.	Per cent going to college.
Arizona	196	131	66.8	Nebraska	2,294	584	25.2
Colorado	1,796	760	42.3	New Mexico	73	32	43.8
Illinois	8,062	2,980	36.9	North Dakota	632	255	38.6
Indiana	4,628	1,705	36.8	Ohio	9,178	3,654	39.8
Iowa	3,922	1,368	34.8	South Dakota	782	331	42.3
Kansas	3,068	1,229	40.0	Wisconsin	4,467	1,899	42.5
Michigan	5,621	2,105	37.4	Wyoming	141	57	40.4
Minnesota	3,699	1,517	41.0				
Indiana	3,079	1,286	41.7	Total	52,416	20,201	38.50
Montana	778	308	39.5				

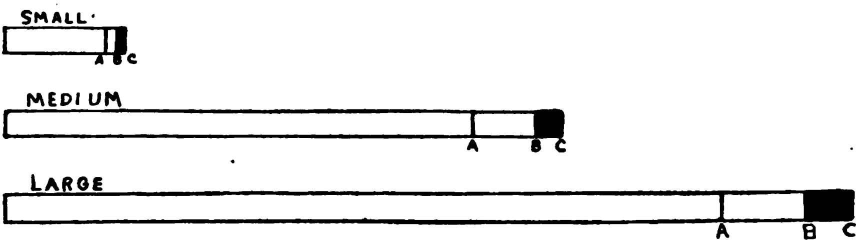

CHART X.—Shows relative enrollments of pupils in the three types of schools (the entire surfaces), the numbers of graduates in 1916 (surfaces AC), and the numbers of graduates who in the fall of 1916 entered colleges (surfaces BC).

NONRESIDENT PUPILS.

Table 20 shows the number of nonresident pupils attending the several types of schools. While in scarcely a single instance is a school to be found which does not include some nonresident pupils, the larger percentages of such pupils are found, as probably would be expected, in the small schools. Here the range is from 2.9 per cent of the entire enrollment (in the small schools of Wyoming) up to 33.6 per cent of the enrollment (in the small schools of Michigan). A very high percentage of nonresident pupils also is to be found in both the small and the medium schools of Indiana, Iowa, Michigan, Missouri, Nebraska, Ohio, and Wisconsin, in all of which the range is from 22 per cent to over 30 per cent of the entire enrollment. If all types of schools within the State be taken into account, Nebraska with a percentage of 21.4, North Dakota with a percentage of 20.5, and South Dakota with a percentage of 18.7, take the lead over all the other North Central States. The data clearly show the results of the operation of the numerous free tuition laws in force throughout

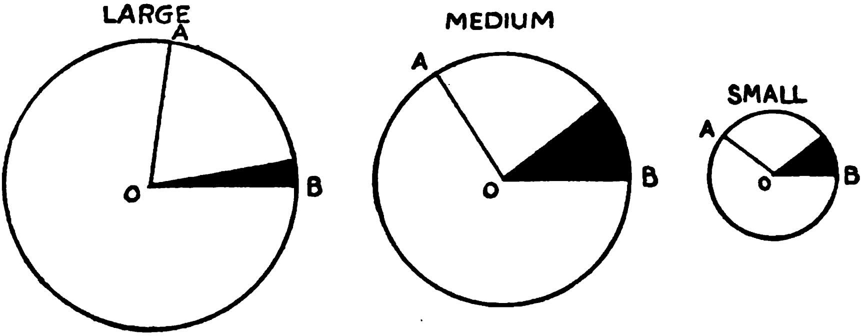

CHART XI.—Relative number of nonresident pupils attending the three types of schools. Total areas represent the total number of pupils, areas in the circles being in proportion to the number of pupils attending each type.

the country. The sons and daughters of rural settlers are not having their educational interests neglected. The consolidated rural high school may not be an accomplished fact in many quarters, but the figures here given indicate that the existing town and city schools are, to all intents and purposes, being utilized as consolidated schools for the entire surrounding community, since in the typical school 13.75 per cent of all pupils enrolled are classified as nonresident pupils. Moreover, in some States, notably Illinois, the very organization of many schools on the basis of townships is tending to the same ends. In such districts, of course, the reports, of necessity, show a small percentage of nonresident students.

Table 21 brings the total percentages by States into more compact form.

TABLE 20.—*Number of nonresident pupils attending the public schools, and ratio of these pupils to the entire enrollment.*

State.	Number of schools.	Total enrollment.	Number nonresident.	Per cent nonresident.
Arizona:				
Large	1	800	0	0.0
Medium	4	850	12	1.4
Small	1	133	13	9.8
Total	6	1,783	25	1.4
Colorado:				
Large	9	7,220	364	5.0
Medium	15	3,779	453	11.9
Small	12	1,367	126	9.3
Total	36	12,366	943	7.6
Illinois:				
Large	46	50,246	2,102	4.0
Medium	70	18,123	3,199	17.6
Small	19	2,276	439	19.2
Total	135	70,645	5,740	8.1
Indiana:				
Large	19	16,071	1,656	10.3
Medium	48	13,089	3,076	23.5
Small	12	942	290	30.7
Total	79	30,102	5,022	16.6
Iowa:				
Large	17	12,704	1,096	8.6
Medium	46	11,301	3,078	27.2
Small	13	1,789	534	29.8
Total	76	25,794	4,708	18.2
Kansas:				
Large	11	8,398	894	10.7
Medium	46	11,756	2,510	21.3
Small	10	1,220	181	14.8
Total	67	21,374	3,585	16.7
Michigan:				
Large	25	21,776	2,331	11.0
Medium	64	16,485	3,908	23.7
Small	23	2,714	918	33.6
Total	112	40,975	7,157	17.4
Minnesota:				
Large	12	12,709	625	4.9
Medium	42	11,144	2,201	19.7
Small	13	1,432	315	22.0
Total	67	25,285	3,141	12.4
Missouri:				
Large	16	17,811	325	18.5
Medium	25	6,143	1,371	22.3
Small	11	1,277	360	28.1
Total	52	25,231	2,056	8.20
Montana:				
Large	4	2,471	292	11.8
Medium	8	2,501	286	11.4
Small	13	1,307	316	24.1
Total	25	6,279	894	14.2
Nebraska:				
Large	2	3,345	187	5.6
Medium	36	7,887	2,086	26.5
Small	19	1,936	549	28.4
Total	57	13,168	2,822	21.4
New Mexico:				
Large				
Medium	1	358		
Small	3	219	13	5.9
Total	4	577	13	2.2
North Dakota:				
Large	2	990	94	9.5
Medium	7	1,300	259	19.9
Small	21	2,038	533	25.6
Total	30	4,328	886	20.5
Ohio:				
Large	49	39,744	3,000	7.5
Medium	83	20,785	5,207	25.1
Small	33	3,458	883	25.5
Total	165	63,987	9,090	14.2
South Dakota:				
Large	1	525	55	10.4
Medium	12	2,840	522	18.4
Small	11	1,147	267	23.7
Total	24	4,512	844	18.7
Wisconsin:				
Large	20	15,145	1,139	7.5
Medium	50	11,453	2,849	24.8
Small	22	2,963	924	31.2
Total	92	29,561	4,912	16.6
Wyoming:				
Large				
Medium	2	612	63	10.2
Small	3	405	12	2.9
Total	5	1,017	75	7.3
Grand total:				
Large	234	210,455	14,160	6.72
Medium	559	140,406	31,060	22.13
Small	239	26,623	6,673	25.06
Total	1,032	377,484	51,913	13.75

TABLE 21.—*Total enrollment, number of nonresident pupils, and ratio of these pupils to the enrollment.*

State.	Schools.	Enrollment.	Nonresidents.	Per cent nonresidents.
Arizona	6	1,783	25	1.4
Colorado	36	12,366	943	7.6
Illinois	135	70,645	5,740	8.1
Indiana	79	30,162	5,022	16.6
Iowa	76	25,794	4,708	18.2
Kansas	67	21,374	3,585	16.7
Michigan	112	40,975	7,157	17.4
Minnesota	67	25,285	3,141	12.4
Missouri	52	25,231	2,056	8.2
Montana	25	6,279	894	14.2
Nebraska	57	13,168	2,822	21.4
New Mexico	4	577	13	2.2
North Dakota	30	4,328	886	20.5
Ohio	165	68,967	9,690	12.6
South Dakota	24	4,512	844	18.7
Wisconsin	92	29,561	4,912	16.6
Wyoming	5	1,017	75	7.3
Total	1,032	377,484	51,913	13.75

DIVISION B—THE TEACHERS.

SCHOOL POLICIES RESPECTING TEACHERS.

Each year recently the association in gathering its report has sought to put each school on record regarding its avowed policies respecting certain important aspects of administration. In the blank submitted in 1916–17 the following two questions were asked, namely:

(*a*) Is it the avowed future policy of the school to employ, for academic subjects, none but college graduates with professional training? (See Standard 2A and B.)

(*b*) Is it the avowed future policy of the school to maintain the ratio of teachers to pupils at approximately 1 to 25?

With the exception of four schools in Wisconsin (one small and three medium schools), the replies to the first question were unanimously in the affirmative. In like manner but one school (in Michigan) replied other than affirmatively to the second question. That all schools have actually lived up to the ideals they themselves have thus voluntarily approved is not the case, as will be seen by reference to later analyses in this study. That they have deliberately sought to evade standards is, however, very much to be doubted.

NUMBER OF TEACHERS.

Table 22 shows the number of teachers employed in the accredited schools of the various States, classified first by sexes and second by character of work taught.

The typical North Central school employs 17.6 teachers, 12 for academic work and 5.6 for vocational work, as defined by the association.[1] Of these teachers, 6.8 are men and 10.8 are women.

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[1] Manual training, household arts, drawing, music, agriculture, and distinctively trade subjects.

The more detailed tables reveal decided contrasts among the types of schools. For example, the typical large school has a corps of 38.4 persons; the typical small school, one of 7.7 persons. The typical large school has 26.3 persons giving instruction in academic subjects and 12.7 persons giving instruction in vocational subjects. In the small school 5.6 persons teach academic branches, and 2.6 persons teach vocational subjects. When, however, the percentages are considered, there is little deviation from the norms by any of the three types of schools. Women teachers outnumber men teachers approximately in the ratio of 3 to 2, and the academic teachers outnumber the vocational teachers nearly in the ratio of 3 to 1.

The summarizing figures show that 38.25 per cent of all the teachers of the association are men; 61.75 per cent are women; 67.36 per cent teach academic subjects, and 32.64 per cent teach vocational subjects.

TABLE 22.—*Number of teachers employed and the averages per school.*

State.	Men.		Women.		Total.		Academic.		Vocational.	
	Number.	Average per school.	Number.	Average per school.	Number.	Average per school.	Total.	Average per school.	Total.	Average per school.
Arizona	42	7	61	10	103	17	64	11	38	6
Colorado	239	7	364	10	603	17	435	12	184	5
Illinois	1,209	9	1,837	14	3,046	22	1,980	15	1,071	8
Indiana	654	8	926	12	1,580	21	1,039	13	601	8
Iowa	410	5	844	11	1,254	17	894	12	386	5
Kansas	393	6	625	9	1,018	15	681	10	344	5
Michigan	747	7	1,308	12	2,055	18	1,420	11	644	6
Minnesota	476	7	835	12	1,311	20	830	12	478	7
Missouri	452	9	639	12	1,091	21	751	14	354	7
Montana	126	5	231	8	357	14	245	10	123	5
South Dakota	102	4	166	7	268	11	189	8	85	4
North Dakota	105	4	201	7	306	10	200	7	102	3
Nebraska	226	4	453	8	679	12	498	9	200	4
New Mexico	16	4	39	10	55	14	38	10	17	4
Ohio	1,216	7	1,604	9	2,820	11	2,144	10	911	6
Wisconsin	482	5	994	11	1,476	16	974	11	459	5
Wyoming	21	4	36	7	57	11	38	8	19	4
Total	6,916	6.7	11,163	10.8	18,079	17.6	12,420	12.0	6,007	5.8
Percentage	38.25	....	61.75	....	....	....	67.36	....	32.64	....

TABLE 23.—*Number of teachers, in percentages, distributed by sexes and by subject matter taught.*

Type of school.	Men teachers.	Women teachers.	Academic teachers.	Vocational teachers.
Large	39.43	60.57	67.44	32.36
Medium	36.97	63.03	67.00	33.00
Small	87.73	62.27	68.27	31 73
Total	38.25	61.75	67.36	32.64

TABLE 24.—*Average number of teachers per school, distributed by sexes and by subject matter taught.*

Type of school.	Men per school.	Women per school.	Men and women.	Teaching academic subjects.	Teaching vocational subjects.
Large	15.1	23.3	38.4	26.3	12.7
Medium	4.8	8.2	13.0	8.8	4.3
Small	2.9	4.8	7.7	5.6	2.6
Total	6.8	10.8	17.6	12.0	5.6

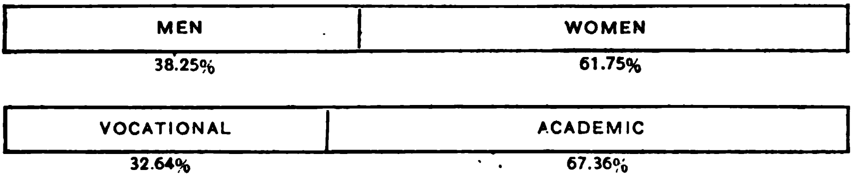

CHART XII.—Shows graphically the percentages of the previous tables, namely the relative number of men and women teachers and the relative number of academic and vocational teachers.

PERMANENCY IN STAFF.

A principle of the association makes no ruling respecting standards of accrediting retroactive upon the schools. The association does, however, seek to enforce rigidly any standard once established and accepted by an accredited school. In consequence of this policy, many teachers who do not technically meet the published standards of qualification are, nevertheless, because of their long connections with accredited schools, left undisturbed in their positions. Not so, however, in respect to teachers brought into the corps after the school has once been accredited. Such teachers are expected, in all respects, to meet the standards of the association literally. In consequence the association in gathering data and in classifying teachers distinguishes between *new* teachers (i. e., those new to the given school that year) and teachers who have been employed in previous years. Table 25 gives the numbers of such teachers in the accredited schools in 1916–17.

TABLE 25.—*Total number new teachers.*

State.	Academic.		Vocational.		Total.	
	Number.	Average per school.	Number.	Average per school.	Number.	Average per school.
Arizona	22	4	11	2	33	6
Colorado	115	3	58	2	173	5
Illinois	401	3	288	2	689	5
Indiana	287	4	153	2	440	5
Iowa	254	3	124	2	378	5
Kansas	187	3	125	2	312	3
Michigan	382	3	181	2	563	5
Minnesota	208	3	128	2	336	5
Missouri	151	3	66	1	217	4
Montana	60	2	43	1	103	4
Nebraska	172	3	81	1	253	4
New Mexico	14	4	6	2	20	5
North Dakota	70	2	53	2	123	4
Ohio	332	2	273	2	605	4
South Dakota	59	2	30	1	89	4
Wisconsin	252	3	121	1	373	4
Wyoming	25	5	6	1	31	5
Total	[1] 2,991	2.9	[2] 1,747	1.6	4,738	4.5

[1] 63.12 per cent.

[2] 36.88 per cent.

The extent to which schools are subjected to annual changes in the personnel of their teachers is always an important item in judging of the efficiency of the system. From these tables it is seen that 24.04 per cent of the academic teachers were new to the given school system in 1916; that 29.09 per cent of the vocational teachers were likewise new; and that combining the entire force—academic and vocational—25.60 per cent were new. These figures are impressive. From one-fifth to one-fourth of the entire corps, considered either from the viewpoint of academic instruction, vocational instruction, or the combined instruction, is shifting each school year. What should be the normal changes in teaching staffs due to deaths, retirements, and accessions because of increased pupil enrollments is an undetermined number. It seems certain, however, that the present fluctuations are due, to a large degree, to other causes, not the least significant of which is the economic one. Until boards of education establish salary schedules that are as favorable as the best, the shiftings in the teaching corps are likely to continue.

Perhaps counter to common opinion, the highest percentages of shiftings in the teaching corps are not found in the small schools. Certainly this seems to be the case in respect to academic teachers. It is in the medium-sized schools—those with enrollments between 151 and 450—that the greatest loss is sustained. Here 32.03 per cent were new to the particular school system in the year we are considering. If these changes come (as we doubtless have just reason to believe) largely because the larger systems are constantly recruiting their forces from the smaller systems, it is very logical that the very large schools should draw talent from the medium-sized schools to a greater degree than from the small schools, or indeed than the medium schools should from those of the lower group. The conclusion seems to follow that large schools prefer to secure experienced teachers in large numbers from fairly good-sized schools, but that medium-sized schools prefer to take inexperienced persons direct from college and university rather than to choose, in any preponderating numbers, from among teachers in the small schools. In other words, the teacher of academic work who enters the small school has less opportunity or likelihood for advancement into the larger systems than has the teacher who begins her work in a fairly good-sized school system. The fact may be, of course, that the ones who begin school work in the small schools are frequently the ones who, because of inferior personalities or abilities, have been rejected by the employing agents of the larger systems. Casual experience, however, seems not to sustain this contention except within definite limits.

It is fair, also, to raise the query whether matrimony is a factor which operates with greater havoc among teachers of one type of schools than of another. It is conceivable that the greater percentages of shiftings among teachers in the medium schools may be due as much to this cause as to the "poachings" of the larger schools. The fact is that young women of vigorous personalities, spirit, and winsomeness can often be more readily secured by medium schools than by large or by small schools, because their salary schedules are usually higher than those of the small schools, and because, secondly, they are less often restricted in their choice of teachers by rules requiring candidates with previous teaching experience—something not uncommonly and unswervingly demanded by the large schools. Nothing, of course, in this study throws any direct light on the question here raised.

Among teachers of vocational subjects not only is there everywhere a greater annual change in position than among academic teachers, but the changes increase notably from the large systems, through the medium to the small. The tables show that 39.64 per cent of these teachers in the small schools were new in 1916, whereas 34.03 per cent and 22.85 per cent are new respectively to the medium and large schools. There seems to be but one of two conclusions to draw from these figures: Either vocational work is being added to all systems at an enormous rate of speed, thereby calling for the annual addition of many new teachers, or else this type of teacher is not continuing long in the teaching profession. It might, of course, indicate that a third factor is at work, namely, that schools of all three types are bidding against each other for the services of vocational teachers, with the large schools drawing heavily from the other types. It seems very probable, however, that with business agencies constantly on the alert to discover the skilled worker with leadership qualities—the men and the women who can do practical things in a practical manner—a very large per cent of the losses to the schools can be traced to the promises of more lucrative positions in the industrial and commercial fields.

Again, it is evident that if the schools are to retain the best talent they must offer inducements of an economic kind that are as attractive as those held out in the business world.

The ratio of new academic and new vocational teachers (Table 27) also throws additional light on the question. In the large and the medium-sized schools the percentage of new academic teachers is from one-third to nearly one-half greater than the percentage of new vocational teachers; in the small schools this ratio is almost exactly reversed. Again the conclusion is certain that vocational teachers do not remain long in the small schools.

The Judd-Counts study for 1913–14 (pp. 55 and 56) shows the total number of new teachers—academic and vocational—to have been 3,661, which number is 26.07 per cent of the entire corps of teachers of that year. The present study shows the percentage based on similar data to be 25.69, indicating that there is no greater total shifting of positions to-day than three years ago.[1] Whether the changes among the different types of schools were similar in number to those made in 1916 the data of the Judd-Counts study do not reveal.

TABLE 26.—*Distribution of new teachers among the three types of schools.*

Type of school.	Academic teachers.			Vocational teachers.			Academic and vocational.
	Total number.	Total new in 1916–17.	Per cent new in 1916—17.	Total number.	Total new in 1916–17.	Per cent new in 1916–17.	Per cent of both academic and vocational teachers new in 1916–17.
Large	6,145	901	14.66	2,966	678	22.85	17.33
Medium	4,914	1,574	32.03	2,418	823	34.03	32.69
Small	1,341	507	22.89	623	247	39.64	28.20
All	12,400	2,982	24.04	6,007	1,748	29.09	25.69

TABLE 27.—*Distribution of new teachers between the two types of school work, academic and vocational.*

Type of school.	New academic teachers.	New vocational teachers.
Large	57.06	42.94
Medium	65.62	34.38
Small	40.71	59.29
All types	63.12	36.88

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[1] These percentages are not based on precisely the same groups of facts, since in this particular study the 87 nonpublic schools are not included. In the Judd-Count study all accredited schools were included. The variations in data must, however, be negligible.

TRAINING AND EXPERIENCE OF NEW TEACHERS.

Tables 28 and 29 show the training and teaching experience of the *new* academic teachers.

An analysis of these tables shows that the number of new teachers of the academic subjects without college degrees is small, being 4.98 per cent of the entire group of new academic teachers and 1.19 per cent of the entire corps of academic teachers. The number without the prescribed amount of professional training is slightly larger, being 12.3 per cent of the whole group of new academic teachers and 2.96 per cent of the entire staff of academic teachers.

While the violations of the standards respecting the academic and professional qualifications of new academic teachers are not alarming in point of numbers (and doubtless were either explained away before the Commission on Secondary Schools or were made the bases for appropriate action), still the tables show that the small schools are less guilty of violations of these kinds than either of the other two types of schools. The largest percentage of new academic teachers without college degrees is found among the medium schools (6.09 per cent); the largest percentage of violations of the standard respecting professional training is found among the large schools (19.31 per cent). It is to be noted, too, that some States are flagrant violators of the association's standards.

The question pertinently arises: Should the association modify its standards respecting the collegiate and professional training of teachers, or should it take more thorough means of discovering violations and more drastic steps in penalizing offenders? There is little doubt that many violations of standards are camouflaged by persons making out the reports; so that often only a very critical analysis of the report as a whole will reveal the violations. The commission, in its short session and in its press of business, can not always be certain of discovering irregularities.

Moreover, and as a circumstance which tends to minimize the seriousness of the apparent disregard of the standards of the association, teachers of science were, until 1916, not made subject to the ruling requiring bachelor's degrees. This exception was made because at that time it seemed absolutely impossible to secure enough teachers of science who could meet the higher ideal. Once the principle of equivalency was recognized, it was extended to teachers who, once approved, changed their location to other school systems. The tables in this study take no account of the facts of "equivalency," but class teachers in accordance with the technical standards of the association.

For the sake of ready comparison the salient facts pertaining to the qualifications of teachers as revealed in the Judd-Counts study of 1914 are reproduced here (Table 30).

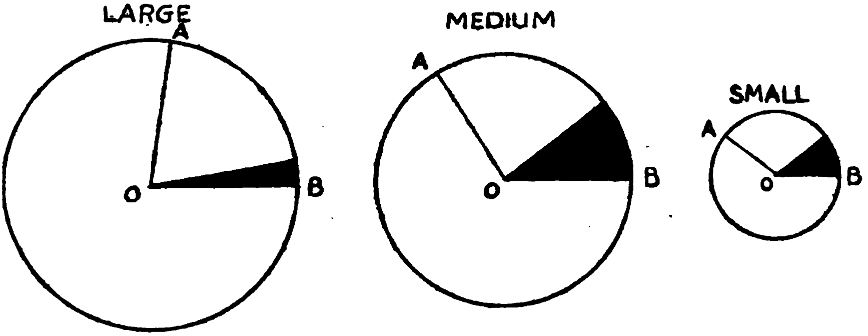

CHART XIII.—Shows graphically the relative number of teachers in the three types of schools, the numbers new to the given system in 1916, and the numbers of new teachers who had had no previous teaching experience. The entire areas represent the total number of teachers. The areas A O B represent the number of new teachers. The dark areas represent the number of new *inexperienced* teachers.

TABLE 30.—*Summaries from the Judd-Counts study, 1914.*

Reproduced in abridged form from Table XI of the Judd-Count study (p. 55). Shows certain statistics respecting the training of teachers according to the North Central Association reports for the year 1913-14.]

Total number of teachers reported (public and nonpublic schools)	14,042
Number *new* teachers (academic and vocational)	3,661
New teachers without teaching experience previously	854
New teachers (academic and vocational) without special professional training.	314
New teachers (academic and vocational) not college graduates	573
Old teachers (academic and vocational) not college graduates	1,688
Old teachers (academic and vocational) without special professional training.	694
Total teachers not college graduates	2,261
Total teachers without special professional training	1,008
Per cent new teachers (academic and vocational)	26.2
Per cent new teachers (academic and vocational) inexperienced	23.3
Per cent new teachers (academic and vocational) without professional training.	8.6
Per cent new teachers (academic and vocational) not college graduates	15.7
Per cent old teachers (academic and vocational) not college graduates	16.3
Per cent old teachers (academic and vocational) without professional training.	6.7
Per cent of *all* teachers (academic and vocational) not college graduates	16.2
Per cent of *all* teachers (academic and vocational) without professional training	7.8

TRAINING OF TEACHERS NOT NEW TO THE GIVEN SYSTEM.

Tables 31 and 32 show the training of academic teachers who were *not* new to the respective school systems when the reports were filed.

These tables show that only 10.31 per cent of the teachers not new to the given systems are without college degrees, and that but 20.14 per cent are without professional training equal to the standards set by the association for new teachers. Again, as probably would be expected, a smaller per cent of the older teachers in the large schools are without college degrees than among the teachers of either of the other two types of schools. On the other hand, a much greater percentage of the older teachers of the large schools are without professional training than is to be found in either of the other two types of schools, particularly in the small schools.

As has already been shown, the changes in the teaching corps are much less marked in the large school than in the other types of schools. Hence we may feel sure the teachers of the large schools have entered the system, in many cases, before the recent demand for the professional training for high-school teachers became prominent. On the other hand, the older teachers of the small and medium schools have not, generally speaking, had so extended a teaching experience as the experienced teachers in the large schools have had. Hence only a small percentage (7.31 per cent) even of the experienced teachers of the small schools have entered upon their work before the opportunities for professional training were made available in recent years.

The tables show, too, that, generally speaking, fewer teachers in the States of the extreme West are lacking in the qualifications set by the association than are the teachers of the central and eastern portion of the North Central territory.

TABLE 31.—*Training of academic teachers not new to the given system, by States.*

State.	Total not new.	Without college degree.	Without 11 hours professional training.	State.	Total not new.	Without college degree.	Without 11 hours professional training.
Arizona	42	2	2	Nebraska	326	34	71
Colorado	320	21	98	New Mexico	24	1	0
Illinois	1,563	160	331	North Dakota	130	2	10
Indiana	752	109	170	Ohio	1,812	156	399
Iowa	640	49	92	South Dakota	130	9	7
Kansas	494	50	60	Wisconsin	722	88	78
Michigan	1,038	134	232	Wyoming	13	1	0
Minnesota	622	29	127				
Missouri	600	110	191	Total	9,416	971	1,897
Montana	185	16	29	Percentage		10.31	20.14

TABLE 32.—*Professional training of academic teachers not new to the given school systems, by types of schools.*

Types of schools.	Number without college degree.	Percentage.	Number without 11 hours of professional training.	Percentage.
Large	493	9.40	1,395	26.61
Medium	393	11.76	441	13.20
Small	85	10.19	61	7.31
Total	971	10.31	1,897	20.14

EXPERIENCE OF TEACHERS.

Tables 33–35 pertain to the experience of both academic and vocational teachers of all types, classified in accordance with the length of experience. Table 36 shows the summaries of these tables.

Taken as an association, the North Central schools only rarely employ teachers without mature experience. The tables show that fewer than 5 per cent of all the teachers were teaching their first school, whereas more than half of them had had more than six years' experience. Of this last-mentioned group, approximately one-fifth (19.8 per cent) had taught more than 15 years.

As would be expected, too, the immature and inexperienced teachers are found in greater numbers, relatively speaking, in the small schools. Here more than one-third of the entire number had had less than three years' experience, and nearly one-tenth (9.52 per cent) were teaching for the first time. On the other hand, the large schools have more than one-fourth of their teachers who have taught in excess of 15 years each, and nearly seven-tenths of the entire corps have taught six years or longer. Even in the medium schools the numbers of relatively inexperienced teachers are few (7.30 per cent), while those with more than 6 years' experience equal nearly 45 per cent of the total number.

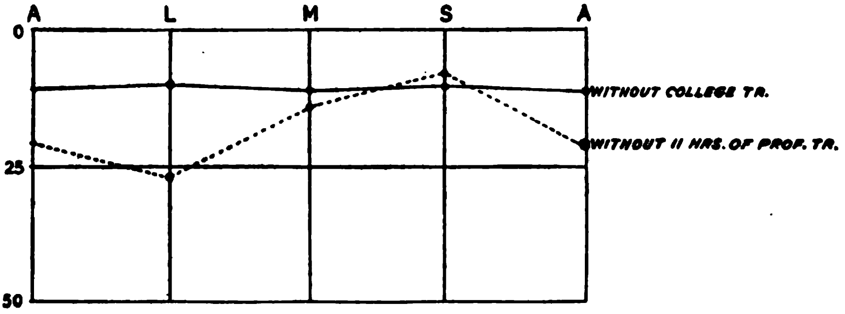

CHART XIV.—Training of academic teachers who were not new to the given school system in 1917 (in percentages). A—entire association; L—large schools; M—medium schools; S—small schools.

Comparing the total number of teachers who were inexperienced in 1916–17 with the number inexperienced in 1913–14 (according to the Judd-Counts study, as shown here in Table 30), a slight change only is seen. In 1913–14 the percentage was 6.08, as against 4.90 per cent in 1916–17. Whether a greater number of the inexperienced teachers in the latter year had taken courses in practice teaching in college and university there is no way of knowing. Since courses of that type have been multiplied each recent year, it is reasonable to think that more inexperienced teachers employed within the association territory had secured the training. If so, the conditions (so far as the association is concerned) are decidedly improving.

TABLE 33.—*Teaching experience of teachers in the large schools, academic, and vocational, new and not new teachers combined.*[1]

State.	Number of schools.	Teachers with no previous experience.	Number with less than 3 years.	Number with 3 but less than 6 years.	Number with 6 but less than 15 years.	Number with more than 15 years.
Arizona	1	0	4	4	15	13
Colorado	9	6	21	41	116	114
Illinois	46	42	187	334	721	615
Indiana	19	12	86	152	298	217
Iowa	17	8	41	120	216	112
Kansas	11	8	54	86	135	72
Michigan	25	21	104	177	432	302
Minnesota	12	5	46	74	268	171
Missouri	16	9	31	87	318	26
Montana	4	1	6	25	73	17
North Dakota	2	0	3	10	25	16
Nebraska	2	1	22	19	46	57
Ohio	49	28	120	286	609	488
South Dakota	1	0	3	45	16	4
Wisconsin	20	22	91	148	280	137
Total	234	163	819	1,608	3,578	2,396
Percentage	....	1.90	9.57	18.79	41.82	27.89

[1] New Mexico and Wyoming have no "large" schools.

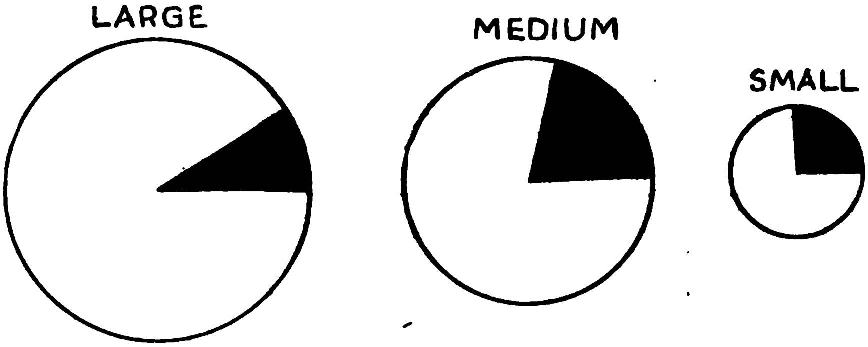

CHART XV.—Shows the percentages of all teachers with teaching experience less than three years.

TABLE 34.—*Teaching experience of teachers in the medium schools, academic and vocational, new and not new teachers combined.*

State.	Number of schools.	Teachers with no previous experience.	Number with less than 3 years.	Number with 3 but less than 6 years.	Number with 6 but less than 15 years.	Number with more than 15 years.
Arizona	4	0	4	20	21	3
Colorado	15	11	37	56	66	25
Illinois	70	63	189	281	260	136
Indiana	48	30	128	53	291	134
Iowa	46	56	148	189	147	53
Kansas	46	51	130	162	166	59
Michigan	64	90	175	230	301	84
Minnesota	42	39	133	213	200	43
Missouri	25	17	67	79	94	43
Montana	8	2	15	85	59	15
North Dakota	7	3	20	28	28	6
Nebraska	36	27	79	124	142	35
New Mexico	1	0	0	7	9	2
Ohio	83	70	92	221	298	162
South Dakota	12	5	32	54	62	11
Wisconsin	50	52	160	183	150	61
Wyoming	2	0	0	1	7	15
Total	559	516	1,409	1,939	2,301	887
Percentage	....	7.30	19.98	27.49	32.62	12.57

TABLE 35.—*Teaching experience of teachers in the small schools, academic and vocational, new and not new teachers combined.*

State.	Number of schools.	Teachers with no previous experience.	Number with less than 3 years.	Number with 3 but less than 6 years.	Number with 6 but less than 15 years.	Number with more than 15 years.
Arizona	1	1	1	7	2	0
Colorado	12	13	15	30	25	15
Illinois	19	11	42	43	38	13
Indiana	12	6	20	19	36	18
Iowa	13	10	43	29	25	11
Kansas	10	7	21	30	19	5
Michigan	23	26	63	47	36	17
Minnesota	13	9	24	48	40	12
Missouri	11	9	16	13	24	9
Montana	13	4	20	36	35	10
North Dakota	21	20	36	66	50	7
Nebraska	19	15	43	34	28	8
New Mexico	3	0	2	14	13	4
Ohio	33	21	44	40	65	35
South Dakota	11	6	21	22	19	3
Wisconsin	22	19	47	41	43	23
Wyoming	3	1	1	8	17	6
Total	239	178	459	527	515	190
Percentage		9.52	24.55	28.19	27.55	10.16

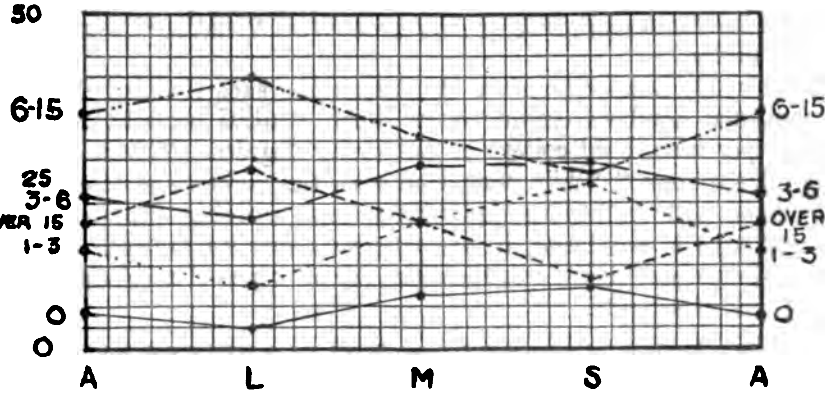

CHART XVI.—Teaching experience of all teachers (in percentages). Abbreviations as in Chart XIV; numbers represent years.

TABLE 36.—*Facts respecting the teaching experience of all teachers, academic and vocational, new and not new.*

Types of schools.	Per cent without previous experience.	Per cent with less than 3 years' experience.	Per cent with 3 but less than 6 years' experience.	Per cent with 6 but less than 15 years' experience.	Per cent with more than 15 years' experience.
Large	1.90	9.57	18.79	41.82	27.89
Medium	7.30	19.98	27.49	32.62	12.57
Small	9.52	24.55	28.19	27.55	10.16
Total	4.90	15.37	23.31	36.59	19.81

TRAINING OF VOCATIONAL TEACHERS.

Table 37 gives the training of vocational teachers in all three types of schools, large, medium, and small, and the subjects which they teach. The items pertaining to college training are fairly accurate. The other items listed in the table are not complete or thoroughly reliable. Replies to the questions asked in the report and bearing on these items were exceedingly vague, misleading, or positively and obviously incorrect. Moreover, scores of reports contained either no replies at all, or else a few replies injected here and there. It was perfectly evident, too, that by many superintendents and principals manual training, domestic science, and art and agriculture, though taught by the association's so-styled vocational teachers, were not regarded in the schools themselves as vocational subjects. Since, therefore, these three groups of subjects are the ones most commonly taught in the public schools, and since they are not listed here at all, the figures given are not as helpful as might be wished. Generally speaking, it seems fair to assume, the difference between 100 per cent and the aggregate of the percentages given in the table dealing with subjects taught would indicate, in a rough manner, the percentages of vocational teachers who are teaching manual training, domestic science, art, and agriculture. Other tables bear more helpfully on the question of vocational work. (See later tables.)

Table 37, however, shows the interesting fact that, of the 6,007 vocational teachers employed in North Central schools, 2,454, or 40.85 per cent, hold college or university degrees. This is a highly significant item. While compared with the percentage of academic teachers with collegiate and professional training the percentage found here is not large, it nevertheless seems to indicate that the trend is toward higher qualifications for all types of teachers and for all types of schools.

TABLE 37.—*Training of vocational teachers in all the accredited public schools, large, medium, small, and the subjects they teach.*

State.	Number of vocational teachers.	Number with college degree.	Number teaching—					Number also teaching academic subjects.
			Combined subjects.	Independent subjects.	Art.	Music.	Physical training.	
Arizona	38	21	0	2	0	0	0	1
Colorado	184	80	17	32	1	1	1	4
Illinois	1,062	461	113	130	22	26	10	49
Indiana	601	204	25	101	11	16	5	27
Iowa	386	182	31	97	3	9	7	19
Kansas	344	173	25	85	9	16	4	22
Michigan	644	235	34	33	16	6	3	28
Minnesota	478	191	22	84	4	2	1	41
Missouri	354	151	16	46	2	3	4	23
Montana	123	62	16	20	2	4	3	5
North Dakota	102	46	5	20	0	3	0	16
Nebraska	200	112	9	47	1	8	3	19
New Mexico	17	14	2	7	0	1	0	1
Ohio	911	327	55	127	13	37	7	29
South Dakota	85	51	9	27	1	10	3	11
Wisconsin	459	139	31	52	0	6	1	12
Wyoming	19	5	1	3	0	0	1	0
Total	6,007	2,454	411	913	85	148	53	307
Percentage		40.85	6.84	15.19	1.41	2.46	0.88	5.11

PERIODS IN SCHOOL DAY.

Table 38 shows the variations in practice respecting the number of periods in the school day. Thirty schools only have a five-period day, while 39 schools have nine or more periods. Precisely 50 per cent of the schools have a seven-period day, and the average length of the period for the entire list of schools is 43.2 minutes.

A comparison is herewith made with data of like character recorded in the Judd-Counts report (p. 80).

Schools.	Present study.	Judd-Counts study.
Number of schools reporting	1,032	479
Number having 5 periods	30	8
Number having 6 periods	85	72
Number having 7 periods	516	284
Number having 8 periods	330	101
Number having 9 or more	39	14

The above figures seem to indicate that there is a slight tendency to increase the number of periods in the school day, though the tendency is as yet not decidedly marked.

The association never has set a fixed standard respecting the question.

TABLE 38.—*Number of periods in the school day, among all schools.*

State.	Number of schools.	Number of periods.					Average length, in minutes.
		5	6	7	8	9 or more.	
Arizona	6	1	3	2			43.3
Colorado	36	1	5	27	3	0	42.8
Illinois	135	4	8	59	56	9	45.0
Indiana	79	2	6	20	50	1	45.3
Iowa	76	1	7	52	14	2	44.0
Kansas	67	7	9	31	16	4	47.0
Michigan	112	6	10	70	23	3	46.2
Minnesota	67	0	2	27	34	4	43.2
Missouri	52	2	6	23	20	1	43.4
Montana	25	1	4	9	11	0	45.9
North Dakota	30	0	0	17	13	0	43.5
Nebraska	57	0	2	22	33	0	41.5
New Mexico	4	0	0	3	1	0	41.0
Ohio	165	3	16	91	42	13	43.7
South Dakota	24	0	1	11	12	0	43.5
Wisconsin	92	2	6	49	34	1	42.7
Wyoming	5	0	0	3	1	1	43.0
Total	1,032	30	85	516	330	39	43.2

LENGTH OF CLASS PERIODS.

Table 39 shows the length of the class periods. The only association ruling on the matter of periods is that they shall be at least 40 minutes in length, excluding all time used for the passing of classes. The table shows that approximately 90 per cent of the schools depart but little from the fixed minimum. Forty-five schools have, however, adopted the 55 or 60 minute class period, and 11 schools have exceeded this length. Whether it is desirable for the association to adopt a longer class period as a standard can only be determined by scientific study of existing practices and results.

TABLE 39.—*Length of recitation or class period, all public schools considered.*

State.	Number of schools.	40 minutes.	45 minutes.	50 minutes.	55 or 60 minutes.	Over 60 minutes.
Arizona	6	2	4	0	0	0
Colorado	36	19	14	0	3	0
Illinois	135	59	68	3	3	2
Indiana	79	54	15	1	10	0
Iowa	76	16	57	1	2	0
Kansas	67	28	23	5	9	2
Michigan	112	21	78	2	4	5
Minnesota	67	41	22	1	4	0
Missouri	52	22	22	4	4	0
Montana	25	11	10	1	3	0
North Dakota	30	17	13	0	1	0
Nebraska	57	46	10	0	0	0
New Mexico	4	3	1	0	0	0
Ohio	165	62	95	8	0	0
South Dakota	24	10	13	0	1	0
Wisconsin	92	57	32	0	1	2
Wyoming	5	2	3	0	0	0
Total	1,032	470	480	26	45	11
Percentage		45.54	46.51	2.51	4.36	1.06

NUMBER OF PERIODS TAUGHT.

The association has steadfastly sought to protect teachers and pupils from the evil effects of burdensome exactions placed on teachers. To that end it has made two positive demands: First, that no teacher of academic subjects shall teach more than six periods per day, and, secondly, that no teacher shall be required or permitted to conduct classroom exercises (including laboratory, shop, session-room, and study-hall work as well as regular class work) amounting to more than 35 periods per week. Table 40 shows the practice bearing upon these two standards in so far as the academic teachers are concerned.

As stated in the footnote to Table 40, it is obvious that persons filling out reports and answering the queries on which Table 40 is based included in their figures superintendents, principals, and other administrative officers who teach fewer than 5 periods per day. Elsewhere, however, the data show that there are but 12,420 academic teachers in the accredited schools. Hence the total of column 2 of Table 40 is too large by 524, though it is impossible to discover precisely how erroneous are the figures given for the several States in that column. The remaining figures in the table are correct.

Assuming, therefore, 2,607 as the correct total for column 2 of the table (Table 40), the table reveals the following facts, namely, that 305 teachers, or 2.45 per cent, are violating the association standard in teaching more than 6 periods daily, and, secondly, that 1,149 teachers, or 9.25 per cent, are likewise violating the standard in assuming burdens that aggregate more than 35 periods per week, counting classroom exercises and quasi-classroom exercises together.

Although the second part of the standard mentioned had been in force only one year when the present reports were collected, the first part has been included in the conditions for accrediting schools for a number of years. And yet the violations indicated in this study are seemingly increasing slightly from year to year. In the Judd-Counts report, for comparison (p. 75), the percentage of *all* teachers teaching 7 periods per day is given as 2.8. In the present study it is 2.45 per cent for the academic teachers only. Just as in 1913–14, the State that is the worst offender in this respect is Illinois, with Ohio, Minnesota, and Missouri following in order. In guiltiness respecting the abuse of the 35-period-per-week standard for all teachers, all of the States are nearly equal, though Illinois, Michigan, and Indiana have the largest number of violations. The detailed tables show, too, that within these States (speaking particularly) and in most of the other States (speaking generally) the large cities are the chief violators of the standard here in question.

The query is pertinent: Are the standards fair and enforceable, or should they be modified or entirely repealed? Surely if the North Central list of schools is to be a guaranteed honor list, the percentages of willful violations should be checked.

TABLE 40.—*Number of periods teachers of academic subjects teach per day and per week.*[1]

State.	Number of academic teachers.	Teaching less than 5 periods.	Teaching 5 periods.	Teaching 6 periods.	Teaching 7 periods.	Employed more than thirty-five 45-minute periods, all told.
Arizona	64	33	18	10	0	2
Colorado	435	59	128	44	1	7
Illinois	1,980	524	943	655	97	303
Indiana	1,039	197	313	331	14	177
Iowa	894	269	492	213	7	18
Kansas	681	212	380	173	0	97
Michigan	1,420	255	806	305	4	258
Minnesota	830	334	408	293	60	44
Missouri	751	115	426	239	33	59
Montana	245	100	162	27	1	13
North Dakota	200	106	108	32	0	8
Nebraska	498	168	246	161	2	10
New Mexico	38	9	18	14	0	0
Ohio	2,144	353	819	882	77	88
South Dakota	189	56	88	17	0	28
Wisconsin	974	325	470	266	9	32
Wyoming	38	16	17	4	0	5
Total	12,420	3,131 [2]2,607	5,842	3,666	305	1,149
Percentage	....	25.20 [2]21.01	47.03	29.51	2.45	9.25

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[1] It is perfectly evident that there are errors in this table. They occur in column 2, and seem to be traceable to the probable fact that superintendents and principals to the number of 524 classed themselves here not as administrative officers but persons teaching fewer than 5 periods per day.

[2] The obviously correct figures and percentages.

SALARIES.

Tables 41–43 show the ranges of salaries paid the academic teachers in the several types of schools. Tables 44–46 show the same items respecting vocational teachers. Table 47 gives the summaries of the six tables.

From these tables it is observed (1) that there is not, item for item, a decided difference in the salaries paid academic and vocational teachers in the several types of schools; (2) that the median salary for the entire association is between $900 and $1,199; (3) that, as would be expected, the small schools employ a very much larger percentage of teachers at small salaries than do the other types of schools; (4) that there is a median difference of approximately $300 salary in the three types of schools—large, medium, and small; and (5) that the typical salaries are, approximately, $787 for small schools, $1,050 for medium schools, and $1,500 or over for large schools.

The Judd-Counts report for 1913–14 gives the number of teachers (academic and vocational) which were receiving salaries of less than $700 as 3,244. This is 33.40 per cent of the total number of teachers whose records were given that year. The figures of the present study show 1,001 persons receiving salaries less than $675 annually, which is 5.15 per cent of the entire number. The comparisons of these two sets of replies are, of course, not quite fair, since there is a difference in the minimum salary used as the base of $25. However, it seems reasonable to conclude that within the three years 1914 to 1917 the minimum salary in North Central schools had notably advanced. It is still, however, too low. When more than 25 per cent of the teachers are receiving less than $900 annually, it is evident that the teacher's calling will not be financially attractive to many individuals, particularly to those who have dependents who must share their earnings.

War conditions and the enhanced cost of living have during the very recent months notably affected salaries of teachers. In consequence, the above analyses are now chiefly valuable as historical facts.

TABLE 41.—*Salaries of academic teachers in large schools.*

State.	Number of academic teachers replying.	Number with a salary of—				
		Less than $675.	$675–$899.	$900–$1,199.	$1,200–$1,799.	Above $1,800.
Arizona	23	0	0	8	14	1
Colorado	220	3	12	46	138	20
Illinois	1,269	4	126	262	468	409
Indiana	502	13	78	256	149	6
Iowa	347	5	72	177	89	4
Kansas	241	1	76	113	50	1
Michigan	678	7	91	238	294	48
Minnesota	352	11	31	68	211	31
Missouri	395	6	43	96	226	24
Montana	60	0	0	0	56	4
North Dakota	35	0	0	25	10	0
Nebraska	112	2	6	48	52	4
New Mexico	0	0	0	0	0	0
Ohio	1,085	6	110	270	534	165
South Dakota	21	0	0	9	12	0
Wisconsin	465	6	109	171	153	26
Wyoming	0	0	0	0	0	0
Total	5,805	64	754	1,787	2,456	743
Percentage	....	1.10	12.98	30.75	42.30	12.79

TABLE 42.—*Salaries of academic teachers in medium schools.*

State.	Number of academic teachers replying.	Number with a salary of—				
		Less than $675.	$675–$899.	$900–$1,199.	$1,200–$1,799.	Above $1,800.
Arizona	30	2	0	6	22	0
Colorado	118	0	35	67	16	0
Illinois	2,363	53	260	1,955	84	13
Indiana	417	4	247	127	20	19
Iowa	397	65	250	70	9	3
Kansas	329	8	228	83	8	2
Michigan	267	53	26	156	30	2
Minnesota	335	15	198	87	32	3
Missouri	177	40	100	34	3	0
Montana	60	2	0	25	29	4
North Dakota	43	0	24	16	3	0
Nebraska	233	9	186	30	8	0
New Mexico	11	0	1	9	1	0
Ohio	645	44	353	184	61	3
South Dakota	92	0	38	37	16	1
Wisconsin	368	35	235	84	11	3
Wyoming	11	3	0	1	3	4
Total	5,896	333	2,181	2,971	356	55
Percentage	....	5.64	36.99	50.39	6.03	0.93

TABLE 43.—*Salaries of academic teachers in small schools.*

State.	Number of academic teachers replying.	Number with a salary of—				
		Less than $675.	$675–$899.	$900–$1,199.	$1,200–$1,799.	Above $1,800.
Arizona	7	0	0	5	2	0
Colorado	64	2	26	28	7	1
Illinois	75	5	39	21	7	3
Indiana	45	10	27	1	5	2
Iowa	68	22	40	5	1	0
Kansas	45	0	38	4	3	0
Michigan	114	38	42	29	3	2
Minnesota	62	6	30	14	10	2
Missouri	36	5	24	6	1	0
Montana	58	0	6	35	16	1
North Dakota	66	1	49	13	2	1
Nebraska	70	18	46	5	1	0
New Mexico	22	0	11	10	1	0
Ohio	119	29	57	20	12	1
South Dakota	42	8	25	8	1	0
Wisconsin	101	12	67	20	2	0
Wyoming	21	1	3	13	3	1
Total	1,015	157	530	237	77	14
Percentage	....	15.46	52.21	23.34	7.58	1.37

TABLE 44.—*Salaries of vocational teachers in large schools.*

State.	Number of vocational teachers replying.	Number with a salary of—				
		Less than $675.	$675–$899.	$900–$1,199.	$1,200–$1,799.	Above $1,800.
Arizona	9	0	0	3	5	1
Colorado	88	1	7	21	52	7
Illinois	692	17	42	150	305	178
Indiana	275	15	47	100	107	6
Iowa	167	7	34	80	42	4
Kansas	110	9	33	40	28	0
Michigan	294	20	40	70	144	20
Minnesota	175	1	23	31	101	19
Missouri	249	3	29	51	135	31
Montana	51	0	0	10	39	2
North Dakota	17	0	1	5	11	0
Nebraska	33	4	4	16	9	0
New Mexico	0	0	0	0	0	0
Ohio	442	9	47	126	206	54
South Dakota	5	0	0	1	3	1
Wisconsin	196	15	51	50	72	8
Wyoming	0	0	0	0	0	0
Total	2,803	101	358	754	1,259	331
Percentage	....	3.60	12.77	26.90	44.91	11.80

TABLE 45.—*Salaries of vocational teachers in medium schools.*

State.	Number of vocational teachers replying.	Number with a salary of—				
		Less than $675.	$675-$899.	$900-$1,199.	$1,200-$1,799.	Above $1,800.
Arizona	22	0	0	5	17	0
Colorado	59	1	18	28	12	0
Illinois	1,476	44	245	1,135	51	1
Indiana	211	13	115	60	21	2
Iowa	160	21	85	45	8	1
Kansas	176	22	99	45	10	0
Michigan	268	42	119	82	22	3
Minnesota	231	6	98	64	59	4
Missouri	72	16	40	13	2	1
Montana	39	0	1	17	20	1
North Dakota	42	0	16	15	11	0
Nebraska	109	7	72	26	4	0
New Mexico	6	0	0	4	2	0
Ohio	206	43	89	61	13	0
South Dakota	62	1	23	20	18	0
Wisconsin	198	35	84	60	19	0
Wyoming	19	0	0	16	3	0
Total	3,356	251	1,104	1,696	292	13
Percentage	....	7.46	32.89	50.53	8.70	0.38

TABLE 46.—*Salaries of vocational teachers in small schools.*

State.	Number of vocational teachers replying.	Number with a salary of—				
		Less than $675.	$675-$899.	$900-$1,199.	$1,200-$1,799.	Above $1,800.
Arizona	3	0	0	2	1	0
Colorado	22	0	11	7	4	0
Illinois	49	13	17	12	7	0
Indiana	41	15	16	3	6	1
Iowa	26	6	9	10	1	0
Kansas	25	1	17	7	0	0
Michigan	41	7	23	11	0	0
Minnesota	59	2	17	25	15	0
Missouri	14	1	10	3	0	0
Montana	37	1	4	26	6	0
North Dakota	60	0	40	15	4	1
Nebraska	30	13	14	3	0	0
New Mexico	10	0	2	6	2	0
Ohio	55	22	20	8	4	1
South Dakota	11	3	5	2	1	0
Wisconsin	55	11	29	10	3	0
Wyoming	7	0	0	4	3	0
Total	545	95	234	154	59	3
Percentage	....	16.51	42.93	28.25	10.82	0.55

TABLE 47.—*Summaries respecting salaries of both academic and vocational teachers.*

Types of schools.	Per cent with salaries less than $675.	Per cent with salaries of—			
		$675–$899	$900–$1,199	$1,200–$1,799.	Over $1,800.
Academic:					
Large	1.10	12.98	30.76	42.30	12.79
Medium	5.64	36.99	50.39	6.03	.93
Small	15.46	52.21	23.34	7.58	1.37
Total	4.35	27.24	39.28	22.71	6.38
Vocational:					
Large	3.60	12.77	26.90	44.91	11.80
Medium	7.46	32.89	50.53	8.70	.38
Small[1]	16.51	42.98	28.25	10.82	.55
Total	6.66	25.29	38.84	24.01	5.17

[1] Doubtless includes some superintendents who teach part time, as well as the regular classroom teachers.

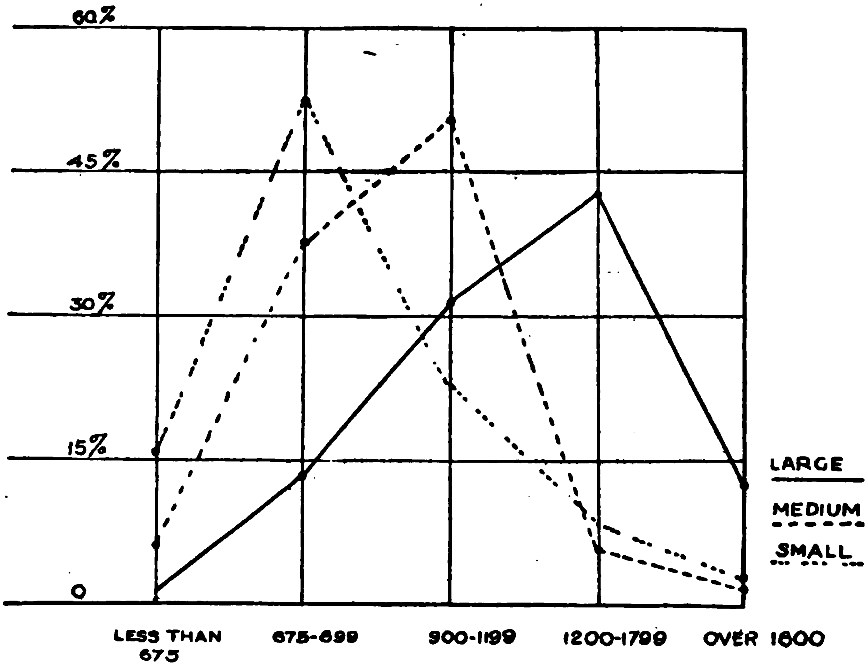
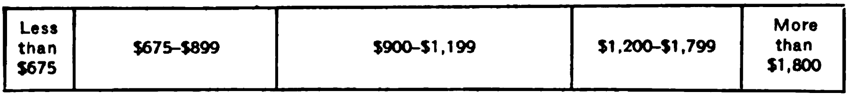
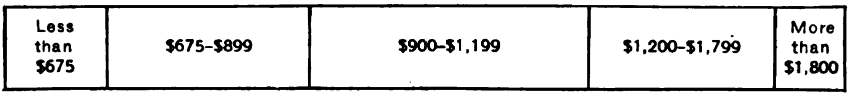


CHART XVII.—Shows graphically some of the facts revealed in Table 47, namely, the ranges of salaries paid academic teachers in the three types of schools.



RANGE OF ACADEMIC SALARIES.



RANGE OF VOCATIONAL SALARIES.

CHART XVIII.—Shows graphically the distribution of salaries among academic and vocational teachers combined, all schools (large, medium, and small) being considered.

DIVISION C—BUILDINGS AND EQUIPMENT.

While the association recognizes that the spirit of the school and the instructional work carried forward are paramount factors in judging of the worthiness and rank of a school, nevertheless truly effective progress, it is felt, can be secured only under reasonably favorable material conditions. Among the desirable characteristics of this kind are a commodious, safe, and hygienic building of a modern style, and illustrative, available, usable equipment of varied sorts. Whether a given building meets the first of these ideals must, in the nature of the case, be left largely to the expert judgment of the high-school visitor. The recency of the construction of the building is, however, suggestive in this matter. In like manner the number of volumes in the library and the annual expenditure for new reference and library books are items which throw considerable light upon the question of adequate equipment in that department of school work; while the monetary value of the equipment for maps and charts, for the several science and arts courses, and for gymnasial and recreational work is a fair criterion at least of the adequacy of the material furnishings in these fields.

Table 48 shows the number of schools which, in the judgment of the local State inspectors, do not measure up reasonably well to the standards set by the association in respect to school buildings. The total of 83 such schools (which is only 8.04 per cent of the entire number of 1,032 public schools accredited) is perhaps not a decidedly astonishing number. It should, however, be reduced if the association's standards are to be fairly maintained.

TABLE 49.—*When high-school buildings were erected.*

State.	Number of schools.	Number of schools erected—				Number not reported.
		Since 1910.	From 1905 to 1910.	From 1895 to 1905.	Before 1895.	
Arizona	6	5	1	0	0	0
Colorado	36	10	5	6	4	11
Illinois	135	42	32	47	14	0
Indiana	79	28	20	17	12	2
Iowa	76	35	8	24	6	3
Kansas	67	28	19	14	4	2
Michigan	112	9	9	3	13	78
Minnesota	67	28	20	8	10	1
Missouri	52	18	18	11	5	0
Montana	25	13	3	6	2	1
Nebraska	57	24	16	8	6	3
New Mexico	4	2	1	1	....	0
North Dakota	30	10	9	11	....	0
Ohio	165	59	32	36	29	9
South Dakota	24	8	7	4	4	1
Wisconsin	92	23	22	28	12	7
Wyoming	5	3	1	1	....	0
Total	1,032	345	223	225	121	118
Percentage	....	33.43	21.60	21.80	11.71	11.43

LIBRARY.

Table 50 gives the number of volumes in the high-school libraries, the average number of volumes per school, and the average annual expenditure of money per school for library purposes. Within the libraries of the 1,032 public high schools accredited by the association in 1917, there was a total of 1,913,996 volumes, which gives an average of 1,854 volumes per school. Moreover, each school, on the average, was expending annually for new books and periodicals the sum of $221.43. In the average number of volumes per school, Michigan, Minnesota, Missouri, and Kansas seem to take the lead; while in the amount of expenditures annually for additions to the libraries, Michigan and Missouri seem to make the best showing. The poorest showing in these respects is made by Nebraska, Colorado, and North Dakota.

TABLE 50.—*Number of volumes in high-school libraries, average number per school, and average annual expenditure per school.*

State.	Total number of volumes.	Average number per school.	Average annual expenditure per school.
Arizona	8,031	1,338	$237
Colorado	69,680	1,935	93
Illinois	243,051	1,800	211
Indiana	116,623	1,476	108
Iowa	89,871	1,182	114
Kansas	151,867	2,266	177
Michigan	294,840	2,632	482
Minnesota	172,018	2,567	292
Missouri	128,553	2,472	320
Montana	35,788	1,432	159
Nebraska	36,148	634	58
New Mexico	3,700	925	138
North Dakota	39,495	1,317	99
Ohio	310,397	1,881	282
South Dakota	46,112	1,921	165
Wisconsin	163,780	1,780	147
Wyoming	4,042	808	240
Total	1,913,996	1,854	221.43

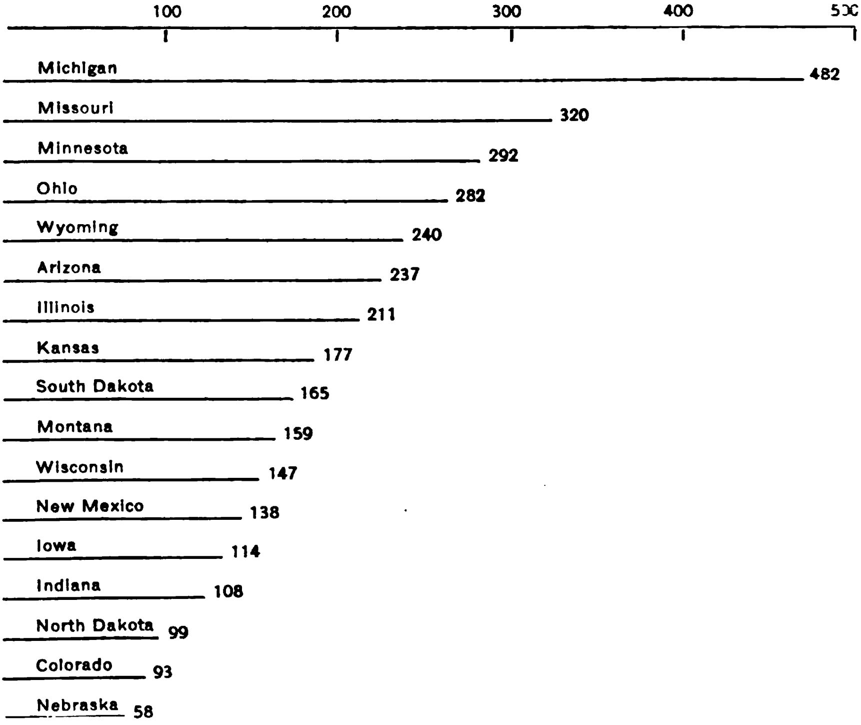


CHART XIX.—Shows graphically the averages given in Table 50, namely, the amount of money annually expended for the library.

EQUIPMENT FOR THE SCIENCES.

Tables 51–55 give the value of the equipment in the several fields of science. Physics, chemistry, biological work, and physical geography take rank in public estimation (as interpreted by the expenditure of money for carrying on the work) in the order given. The typical school in the North Central Association has had expended on it $1,099 for physical equipment, $808 for chemical equipment, $448 for biological equipment, and $117.91. for equipment for physical geography. No doubt the expenditure for the latter subject is smaller than would otherwise be the case if it were not for the fact that frequently the equipment provided for other sciences is used also in the study of physical geography.

When the figures are analyzed by States the following facts are noted: Missouri leads all the States in expenditures per school for equipment in physics. Illinois, Indiana, and Michigan follow closely. On the other hand, New Mexico and Nebraska provide very sparingly for physics, expending, respectively, but $325 and $382 per school. North Dakota and Kansas stand slightly above, with expenditures of $643 and $665.

In chemistry Ohio seems to have made the most adequate provision, since that State has expended on an average $1,323 per school for equipment in this branch of study. Arizona, Illinois, and Missouri follow closely. At the other end of the list Kansas with $280 per school, New Mexico, with $288 per school, Nebraska with $386 per school, and North Dakota with $392 per school seem either to give little attention to the subject as States, or else make in comparison rather inadequate provision for it wherever it is offered.

In the biological sciences Colorado and New Mexico, with equipment respectively averaging per school only $49 and $50, make what appears on paper to be a rather poor showing. No State, in fact, makes an especially noteworthy showing, but Illinois with $941 per school, Arizona with $770 per school, and Missouri with $766 per school rank fairly well.

In physical geography, New Mexico takes lowest rank, as it makes no provsion whatever (in equipment) for the subject. Kansas expends but $17 per school, Wyoming but $30, and Montana but $47. At the other end of the list Missouri leads again with an expenditure per school of $308, Illinois follows with $239, and Michigan stands third with an expenditure of $147 per school.

TABLE 51.—*Total value of equipment in physics.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$5,880	$980	Nebraska	$21,775	$382
Colorado	37,908	1,053	New Mexico	1,300	325
Illinois	190,732	1,412	North Dakota	19,276	643
Indiana	113,256	1,421	Ohio	191,325	1,160
Iowa	67,938	893	South Dakota	17,672	736
Kansas	44,555	665	Wisconsin	84,187	914
Michigan	156,630	1,398	Wyoming	4,500	900
Minnesota	68,935	1,029			
Missouri	78,633	1,512	Total	1,134,952	....
Montana	26,260	1,050	Average	66,761	1,089

TABLE 52.—*Total value of equipment in chemistry.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$6,500	$1,083	Nebraska	$22,015	$386
Colorado	29,782	813	New Mexico	1,150	288
Illinois	145,551	1,078	North Dakota	11,770	392
Indiana	58,917	746	Ohio	218,311	1,323
Iowa	35,996	472	South Dakota	14,797	616
Kansas	18,790	280	Wisconsin	42,836	460
Michigan	102,035	911	Wyoming	4,500	900
Minnesota	50,753	757			
Missouri	52,419	1,008	Total	834,161	....
Montana	18,540	742	Average	49,068	806

TABLE 53.—*Total value of equipment in biology.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$4,620	$770	Nebraska	$17,755	$312
Colorado	1,756	49	New Mexico	200	50
Illinois	127,033	941	North Dakota	8,188	273
Indiana	38,199	483	Ohio	53,410	324
Iowa	20,345	267	South Dakota	6,375	266
Kansas	17,091	255	Wisconsin	34,260	372
Michigan	49,778	444	Wyoming	850	170
Minnesota	35,254	526			
Missouri	39,815	766	Total	462,884	....
Montana	7,955	318	Average	27,228	448

TABLE 54.—*Total value of equipment in physical geography.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$845	$140	Nebraska	$3,350	$59
Colorado	4,174	116	New Mexico	0	0
Illinois	32,322	239	North Dakota	2,930	98
Indiana	3,965	50	Ohio	16,270	99
Iowa	5,788	76	South Dakota	2,730	114
Kansas	1,170	17	Wisconsin	7,172	78
Michigan	16,545	147	Wyoming	150	30
Minnesota	7,070	105			
Missouri	16,030	308	Total	121,691	....
Montana	1,180	47	Average	7,158.29	117.91

TABLE 55.—*Value of equipment in the several fields of science.*

Sciences.	Total value of equipment.	Average value per State.	Average value per school.
Physics	$1,134,952	$66,761	$1,099
Chemistry	834,161	49,068	808
Biological sciences	462,884	27,228	448
Physical geography	121,691	7,158.29	117.91
Total	2,553,688	150,217	2,474

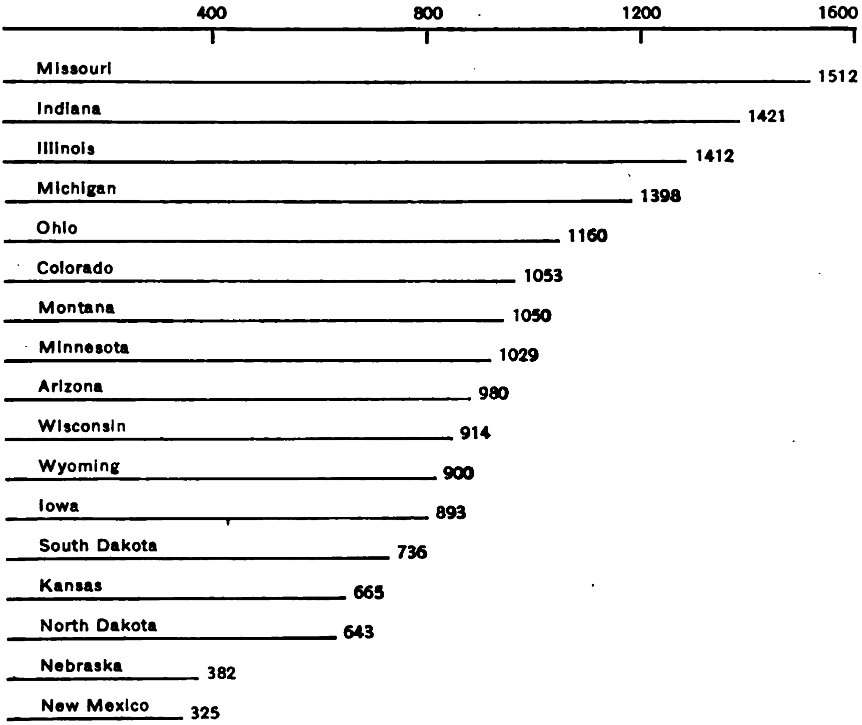


CHART XX.—Shows graphically the averages given in Table 51, namely, the average value (per school) of the equipment in physics.

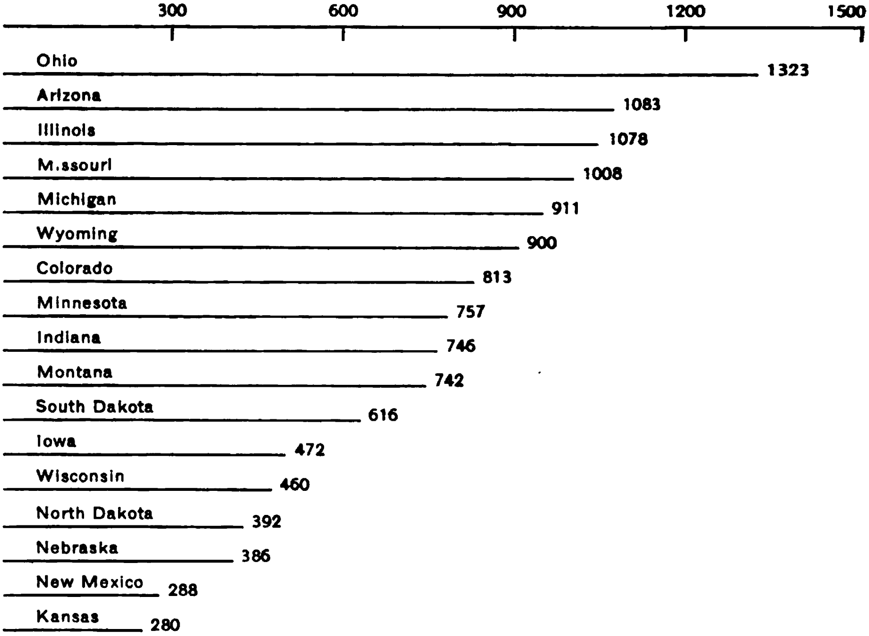


CHART XXI.—Shows graphically the averages given in Table 52, namely, the average value (per school) of the equipment in chemistry.

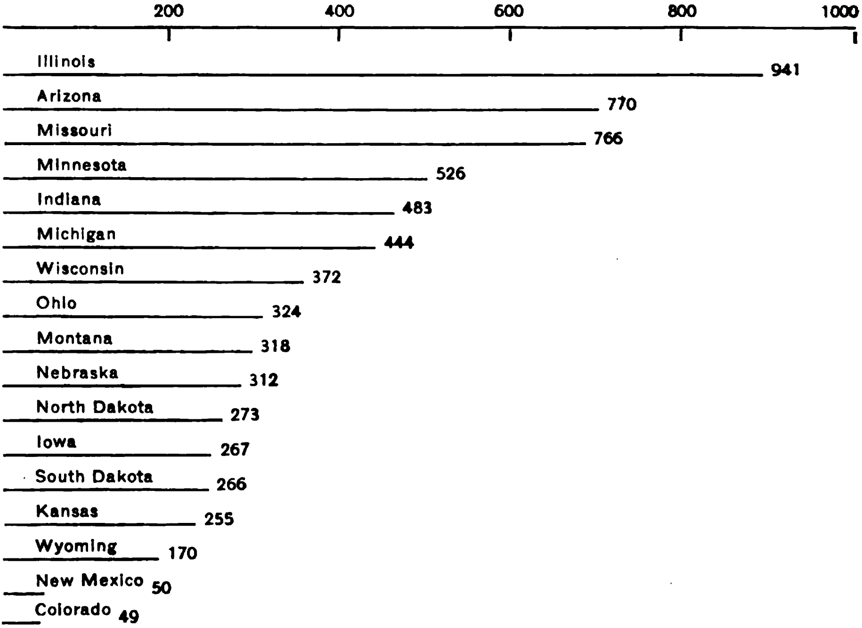


CHART XXII.—Shows graphically the averages of Table 53, namely, the average value (per school) of the equipment in biology.

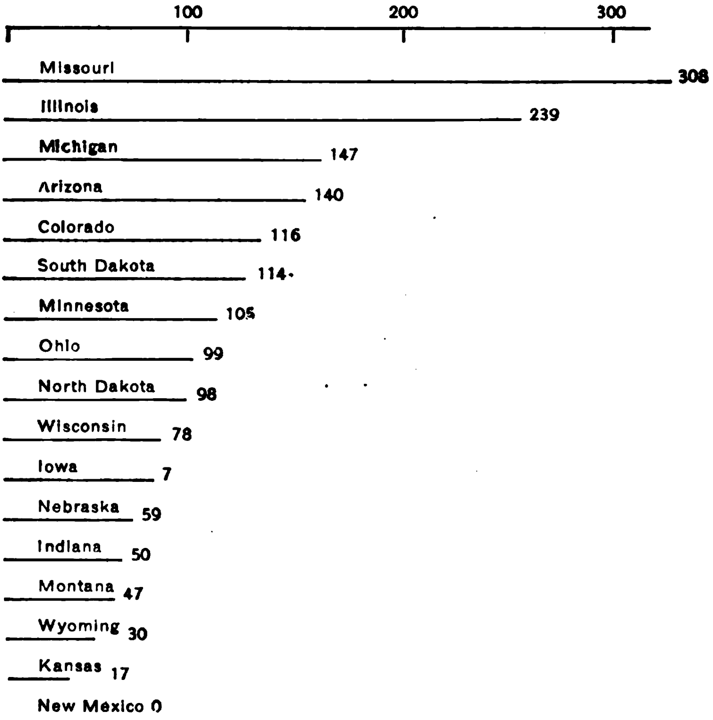


CHART XXII.—Shows the averages of Table 54, namely, the average value (per school) of the equipment in physical geography.

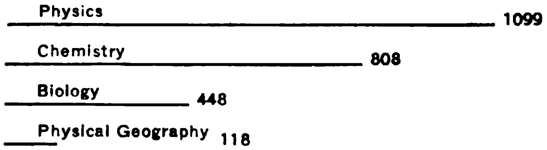


CHART XXIV.—Shows graphically the facts given in Table 55, namely, the average value (per school) of the equipment in the sciences.

AGRICULTURE.

Agriculture as a subject of study in the high school is of recent birth. The equipment provided for its work could, therefore, scarcely be expected to be as complete and extensive as that for the older branches of study. Nevertheless, to offer the subject without making adequate provision for concrete illustrative and working material would seem to be the height of absurdity. The leading criticism directed against the teaching of agriculture in the public schools has been its superficiality, abstractness, and bookishness. If any branch of study calls for generous expenditures of money for equipment, surely agriculture does. The tables show, however, that as yet the amount voted for such material has been exceedingly small and inadequate. Throughout the association territory only $153 per school has been invested, and a total amount of $158,420 is all that has been devoted to the purposes of agriculture. Among the States, Minnesota, with an average of $427 per school, and North Dakota, with an average of $359 per school, take the lead. On the other hand, Wyoming, reporting no expenditures whatever, Colorado, with an expenditure of only $21 per school, and New Mexico, with $25 per school, either have, it would seem, not introduced the subject to any notable extent or else are far from sustaining its teaching in a satisfactory manner. Nor do any of the other States have reason to be satisfied with the provisions they are making for this new but valuable subject.

TABLE 56.—*Total value of equipment in agriculture and the average value per school.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$400	$66	Nebraska	$11,650	$204
Colorado	770	21	New Mexico	100	25
Illinois	26,921	199	North Dakota	10,765	359
Indiana	4,950	62	Ohio	28,975	176
Iowa	12,288	161	South Dakota	3,382	141
Kansas	14,100	210	Wisconsin	7,439	81
Michigan	8,020	71	Wyoming	0	0
Minnesota	28,615	427			
Missouri	8,680	167	Total	158,420	....
Montana	1,365	55	Average	9,319	153

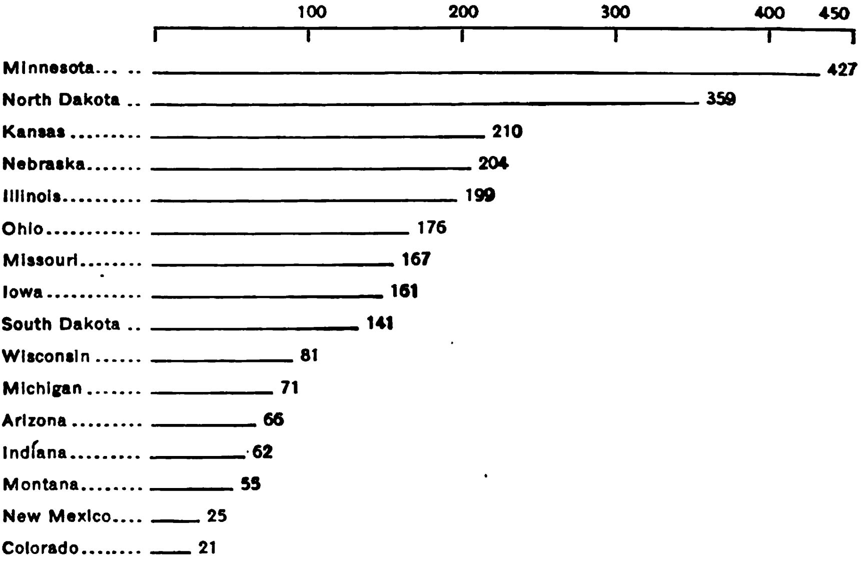


CHART XXV.—Shows graphically the facts given in Table 56 namely, the average value (per school) of the equipment for agriculture.

MANUAL TRAINING.

Table 57 shows the value of the equipment in manual training. The enormous sum (relatively speaking) of $2,920,553 has been devoted to this single branch of study—an amount considerably in excess of that provided for all the sciences combined. With the exception of the States of New Mexico and Nebraska (which expend, respectively, per school $425 and $535), the average per school expenditure for equipment of this sort is high. Minnesota leads with an amount equal to $5,305 per school; then follow Kansas with $3,899 per school and Illinois with $3,817 per school.

TABLE 57.—*Total value of equipment in manual training.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$21,710	$3,618	Nebraska	$30,475	$535
Colorado	68,478	1,902	New Mexico	1,700	425
Illinois	515,283	3,817	North Dakota	33,447	1,115
Indiana	189,600	2,400	Ohio	483,607	2,931
Iowa	100,830	1,326	South Dakota	29,625	1,234
Kansas	261,237	3,899	Wisconsin	196,187	2,133
Michigan	395,004	3,527	Wyoming	6,800	1,360
Minnesota	355,424	5,305			
Missouri	149,716	2,879	Total	2,920,553	....
Montana	81,430	3,257	Average	171.797	2,829

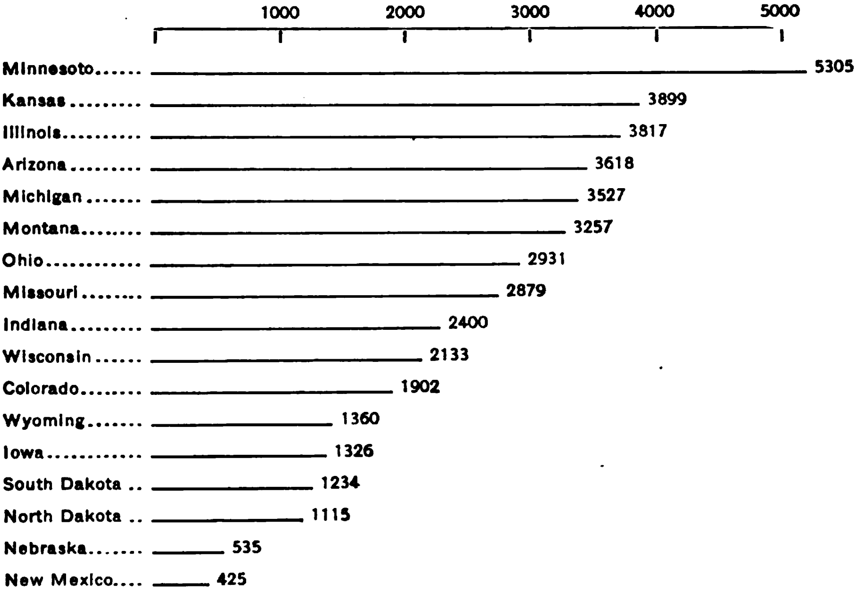


CHART XXVI.—Shows graphically the averages of Table 57, namely, the average value (per school) of the equipment in manual training.

COOKING AND SEWING.

Tables 58 and 59 show the amounts which have been expended for equipment, for cooking, and sewing. Contrasted with the amounts spent for manual training, the sums are not excessively large. They are for cooking, $689,230; for sewing, $316,498; or for the two combined the amount is $1,005,728. The typical North Central school has expended $668 for equipment for cooking and $306 for equipment for sewing.

Compared by States, Montana leads in the generosity of its support for cooking, and Arizona in its support for sewing. The States which have expended least per school for both subjects are New Mexico and Nebraska.

TABLE 58.—*Total value of equipment in cooking.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$6,660	$1,110	Nebraska	$21,390	$375
Colorado	20,242	562	New Mexico	1,050	263
Illinois	136,482	1,011	North Dakota	16,304	543
Indiana	45,240	573	Ohio	93,512	567
Iowa	40,495	532	South Dakota	11,117	463
Kansas	34,045	508	Wisconsin	45,580	406
Michigan	59,048	527	Wyoming	5,200	1,040
Minnesota	57,715	861			
Missouri	55,522	1,068	Total	689,230	
Montana	39,600	1,584	Average	40,543	668

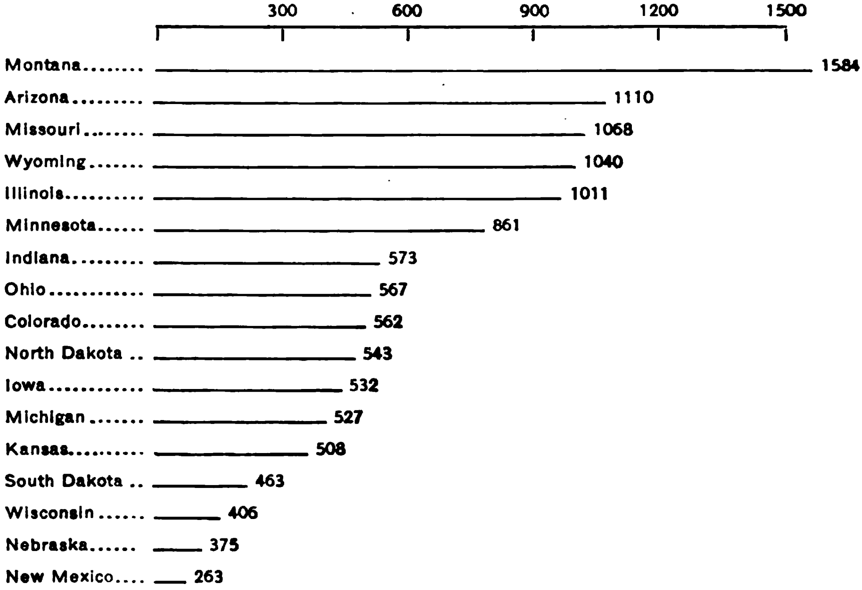


CHART XXVII.—Shows graphically the facts of Table 58, namely, the average value (per school) of the equipment in cooking.

TABLE 59.—*Total value of equipment in sewing.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$33,251	$554	Nebraska	$7,345	$129
Colorado	11,332	315	New Mexico	375	94
Illinois	37,613	278	North Dakota	4,946	165
Indiana	20,403	277	Ohio	46,128	280
Iowa	14,668	193	South Dakota	4,001	167
Kansas	16,797	250	Wisconsin	23,587	256
Michigan	39,173	356	Wyoming	1,550	310
Minnesota	25,830	386			
Missouri	19,199	369	Total	316,498	
Montana	10,300	414	Average	18,617	306

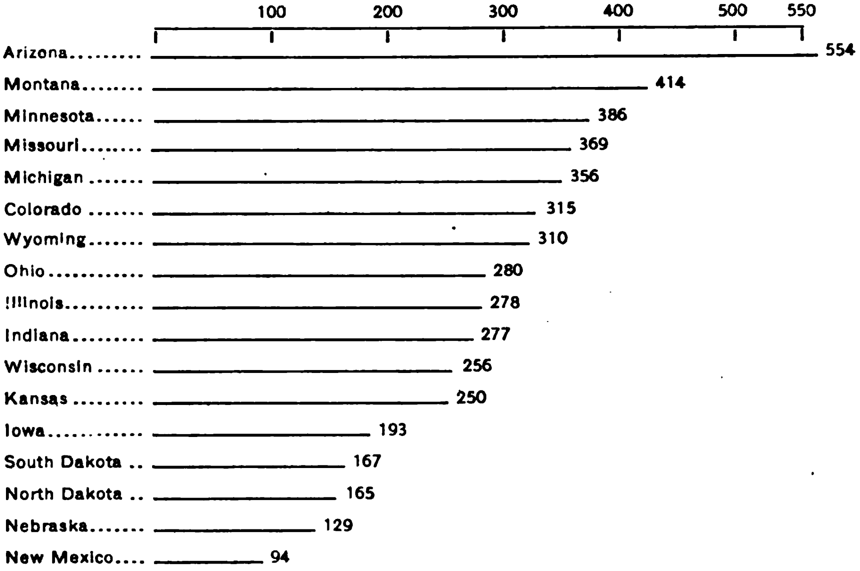


CHART XXVIII.—Shows graphically the facts of Table 59, namely, the average value (per school) of the equipment in sewing.

TABLE 60.—*Expenditures for the four practical arts subjects together—Agriculture, manual training, cooking, and sewing.*

Subjects.	Total value of equipment.	Average value per State.	Average value per school.
Agriculture	$158,420	$9,319	$153
Manual training	2,920,553	171,797	2,829
Cooking	689,230	40,543	668
Sewing	316,498	18,617	306
Total	4,084,701	240,276	3,958

COMMERCIAL SUBJECTS.

Table 61 shows the value of equipment for commercial subjects. The average is $792 per school, or $4,986 per State. Arizona, with its few schools, leads all the States in the amount of money expended per school, with Illinois and Montana taking rank considerably below her. South Dakota, Nebraska, and New Mexico provide least generously for equipment of this kind.

TABLE 61.—*Total value of equipment on commercial subjects.*

State.	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$11,000	$1,833	Nebraska	$20,875	$366
Colorado	21,939	610	New Mexico	1,800	450
Illinois	169,483	1,255	North Dakota	13,767	459
Indiana	49,192	622	Ohio	126,018	764
Iowa	44,005	579	South Dakota	8,190	341
Kansas	41,862	624	Wisconsin	82,163	893
Michigan	108,021	964	Wyoming	3,950	750
Minnesota	47,522	709			
Missouri	40,675	782	Total	817,601	
Montana	27,139	1,086	Average	4,986	792

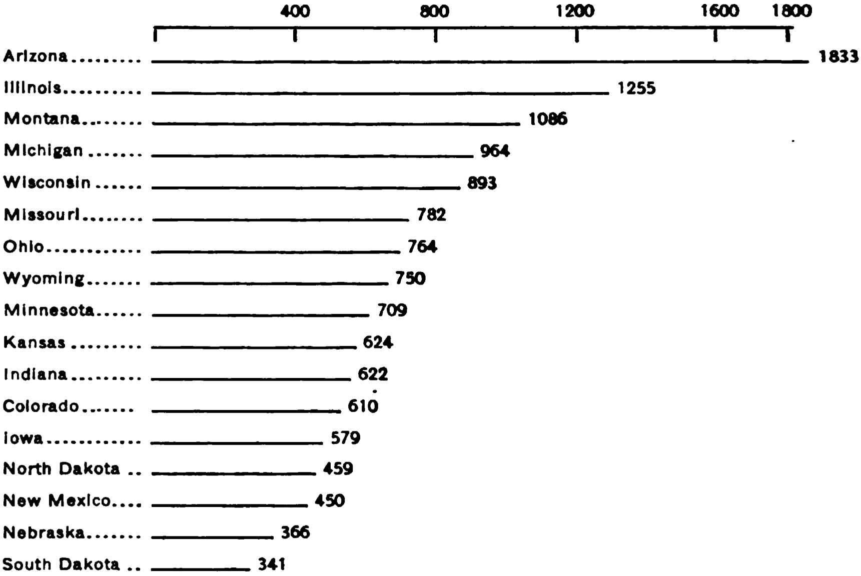


CHART XXIX.—Shows graphically the facts of Table 61, namely, the average value (per school) of equipment for commercial subjects.

MAPS AND CHARTS.

Table 62 gives the value of the equipment in maps and charts. The typical school has appropriated for this purpose the sum of $162, while the sum total for the entire 17 States is $167,684. Excepting Colorado, which has provided equipment of this kind amounting to only $65 per school, there is little notable variation from the norm or average by the other States. Wyoming leads with an expenditure of $215 per school, Michigan expends $196 per school, and Minnesota $193 per school. No State, except Colorado, falls below $114 per school.

TABLE 62.—*Value of maps and charts.*

State.	Total value by States.	Average value per school.	State.	Total value by States.	Average value per school.
Arizona	$860	$143	Nebraska	$8,460	$148
Colorado	2,404	65	New Mexico	500	125
Illinois	24,472	181	North Dakota	3,647	122
Indiana	9,519	122	Ohio	30,660	186
Iowa	10,845	142	South Dakota	2,730	114
Kansas	10,182	152	Wisconsin	16,943	184
Michigan	21,997	196	Wyoming	1,075	215
Minnesota	12,982	193			
Missouri	7,148	137	Total	167,684	....
Montana	3,260	130	Average	9,864	162

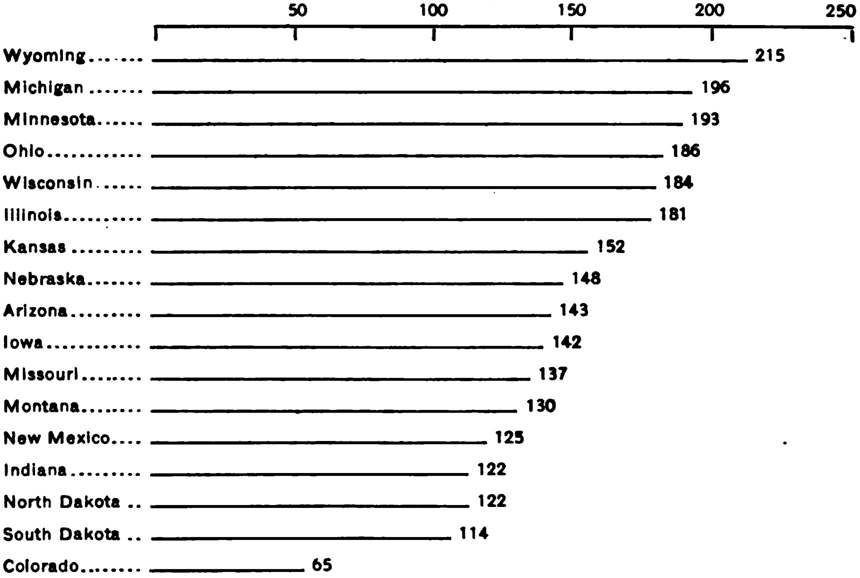


CHART XXX.—Shows graphically the facts of Table 62, namely, the average value (per school) of the equipment in charts and maps.

GYMNASIUMS AND PLAYGROUNDS.

Table 63 shows the value of equipment for gymnasiums and playgrounds. The grand total is $6,632,214, being an average per State of $390,130 and per school of $6,426. These figures indicate, to some extent at least, the educational and popular interest in health, recreation, and training for leisure hours. Relatively speaking, the taxpayers have been exceedingly lavish in the moneys voted for these purposes, though by no means too lavish. The State of Indiana leads all others, with an appraised valuation of $11,994 per school devoted to the work of this kind. Montana follows with $11,677, and then Illinois and Michigan with $9,598 and $8,016 per school, respectively. South Dakota with an average expenditure of $1,107 per school has provided least extensively for equipment of this kind, and Nebraska ranks next with a valuation of $1,926 per school.

TABLE 63.—*Total value of equipment for gymnasiums and playgrounds.*

State	Total value.	Average value per school.	State.	Total value.	Average value per school.
Arizona	$17,000	$2,833	Nebraska	$109,800	$1,926
Colorado	109,330	3,037	New Mexico	21,000	5,250
Illinois	1,295,806	9,598	North Dakota	62.940	2,098
Indiana	947,558	11,994	Ohio	1,292,148	7,831
Iowa	458,975	6,039	South Dakota	26,552	1,107
Kansas	217,042	3,239	Wisconsin	352.423	3,831
Michigan	907,862	8,106	Wyoming	27,660	4,030
Minnesota	197,300	2,945			
Missouri	296,882	5,709	Total	6,632,214	
Montana	291,936	11,677	Average	390,130	6,426

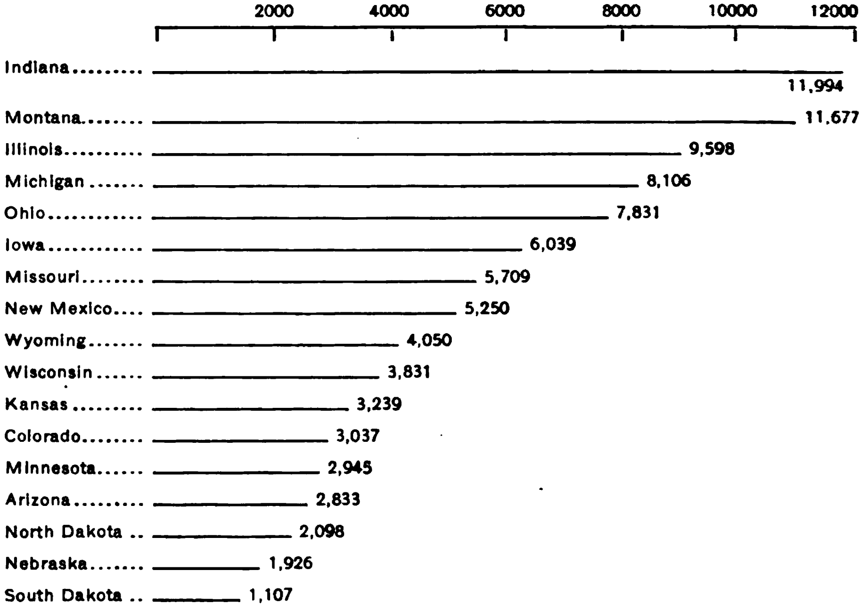


CHART XXXI.—Shows graphically the facts of Table 63, namely the average value (per school) of the total equipment for gymnasium and playground activities.

SCHOOL PLANT.

Table 64 shows the value of the entire equipment for the school plants, buildings, and grounds. The figures give us the total of $130,443,348, or an average of $7,673,138 per State, and $126,398 per school. Ohio leads with an investment of over 30 million dollars;

Michigan comes next with an investment of nearly 16 million dollars, and Iowa stands third with an investment of about 12¼ million dollars. When, however, the average value per school is taken as the basis—a much fairer basis—the ranking is Ohio, Minnesota, Missouri. At the bottom of the list stands Nebraska, followed closely by New Mexico and North Dakota.

TABLE 64.—*Total value of equipment of the complete school plant, building and grounds.*

State.	Total valuation.	Average valuation per school.	Number of schools reporting.
Arizona	$862,300	$143,716	6
Colorado	2,914,055	80,946	36
Illinois	11,603,035	85,948	135
Indiana	10,546,564	133,500	79
Iowa	12,293,483	161,756	76
Kansas	6,103,804	91,101	67
Michigan	15,958,256	142,484	112
Minnesota	11,542,752	172,280	67
Missouri	8,474,089	162,965	52
Montana	2,746,185	109,847	25
Nebraska	2,453,450	43,358	57
New Mexico	213,000	53,250	4
North Dakota	1,910,400	63,680	30
Ohio	30,533,377	185,050	165
South Dakota	2,193,756	91,407	24
Wisconsin	9,689,842	105,323	92
Wyoming	405,000	81,000	5
Total	130,443,348	126,398	1,032
Average	7,673,138		

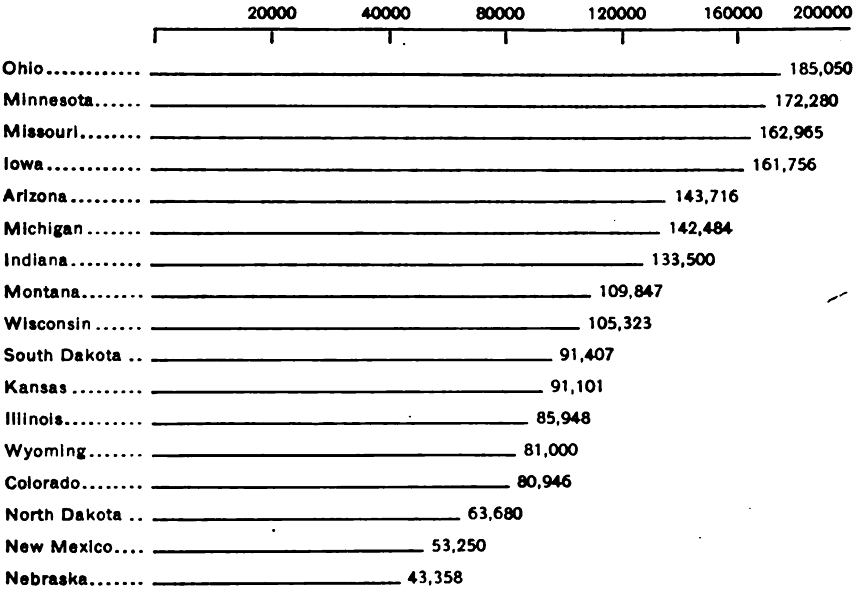
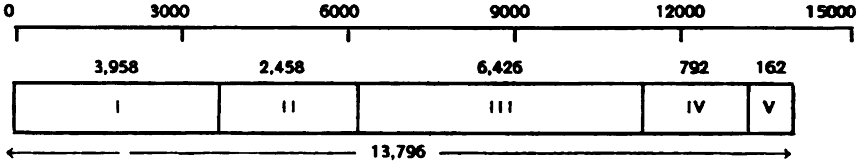


CHART XXXII.—Shows graphically the facts of Table 64, namely, the average value (per school) of the equipment of the complete school plant, building and grounds.

TABLE 65.—*Value of equipment of the several sorts given in the other tables.*

Equipment.	Total value.	Average per State.	Average per school.
Science	$2,537,290	$149,252	$2,458
Practical arts	4,084,701	240,276	3,958
Commercial subjects	817,601	4,986	792
Maps and charts	167,684	9,864	162
Gymnasiums and playgrounds	6,632,214	390,130	6,426
Entire plant	130,443,348	7,673,138	126,398



I—Practical arts.
II—Science.
III—Gymnasium and playgrounds.
IV—Commercial subjects.
V—Maps and charts.
Entire area—total average value of equipment.

CHART XXXIII.—Shows graphically the facts of Table 65, namely, the average value (per school) of the equipment of various sorts.

DIVISION D—THE PROGRAM OF STUDIES.

Division D of this study deals with the extent of the offerings in units and half units in the several departments of work. The tables doubtless bear out common impressions, but likewise give a fact basis for comparisons such as, it is believed, have never heretofore been made by the association.

Table 66 shows that in English the extent of the offerings are: 3 units by 86 schools; 4 units by 879 schools; and more than 4 units by 67 schools. In percentages the figures are: 8.33 per cent of the schools offer three units only; 85.17 per cent offer four units; and 6.49 per cent offer more than four units. Kansas and Nebraska are the States in which the 3-unit arrangement is found most often.

TABLE 66.—*Offerings in English.*

State.	Number of schools offering —			State.	Number of schools offering—		
	Three units.	Four units.	Over 4 units.		Three units.	Four units.	Over 4 units.
Arizona	0	5	1	North Dakota	1	27	2
Colorado	0	34	2	Nebraska	28	28	1
Illinois	6	117	12	New Mexico	1	2	1
Indiana	2	70	7	Ohio	17	145	3
Iowa	2	68	6	South Dakota	0	23	1
Kansas	24	40	3	Wisconsin	2	77	13
Michigan	2	103	7	Wyoming	0	4	1
Minnesota	0	63	4				
Missouri	1	51	0	Total	86	879	67
Montana	0	22	3	Percentage	8.33	85.17	6.49

Table 67 shows the offerings in Latin. Twenty-four accredited schools, or 2.32 per cent, do not offer the subject; 88, or 8.52 per cent, offer it for two years; 87, or 8.43 per cent, offer it for three years; and the others, 833, or 80.71 per cent, offer it for four years. Of the schools not offering the subject, 6 are in Illinois, 1 in Michigan, 1 in North Dakota, 4 in Nebraska, 1 in South Dakota, and 11 in Wisconsin. Of the States in which 2 units only are offered, Michigan and Nebraska have the greatest number of schools.

TABLE 67.—*Offerings in Latin.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	Two units.	Three units.	Four units.		None.	Two units.	Three units.	Four units.
Arizona	0	0	2	4	North Dakota	1	9	4	16
Colorado	0	4	3	29	Nebraska	4	13	9	31
Illinois	6	6	6	117	New Mexico	0	0	1	3
Indiana	0	2	10	67	Ohio	0	2	0	163
Iowa	0	0	1	75	South Dakota	1	5	1	17
Kansas	0	4	24	39	Wisconsin	11	6	5	79
Michigan	1	19	7	85	Wyoming	0	2	3	0
Minnesota	0	9	7	51					
Missouri	0	5	2	45	Total	24	88	87	833
Montana	0	2	2	21	Percentage	2.32	8.52	8.43	80.71

Table 68 shows that Greek is being offered in only 37 of the North Central schools, and for a period of two units only. But two small schools offer the subject, and only eight of the medium schools do so. No school which offers the subject offers less than two units.

TABLE 68.—*Offerings in Greek.*

State.	Number of schools offering—		State.	Number of schools offering—	
	None.	Two units.		None.	Two units.
Arizona	6	0	North Dakota	30	0
Colorado	35	1	Nebraska	56	1
Illinois	130	5	New Mexico	4	0
Indiana	75	4	Ohio	157	8
Iowa	75	1	South Dakota	24	0
Kansas	67	0	Wisconsin	90	2
Michigan	107	5	Wyoming	5	0
Minnesota	66	1			
Missouri	43	9	Total	995	37
Montana	25	0	Percentage	96.41	3.59

Table 69 shows the offerings in German. Of the 1,032 public schools accredited in 1917, all but 58, or 5.62 per cent, offered some work in German. Of those which did offer the subject, 472, or 45.73 per cent, offered it for two years; 254, or 24.61 per cent, offered for three years; and 248, or 24.03 per cent, for four years. Every accredited school in Iowa, Minnesota, North Dakota, South Dakota, and Wyoming included German in its offerings. The only States in which German was not prominent in the schools are Arizona and Colorado. The changes in interest in this subject because of the entrance of the United States into the war will, in the future, make an interesting comparative study.[1]

TABLE 69.—*Offerings in German.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	Two units.	Three units.	Four units.		None.	Two units.	Three units.	Four units.
Arizona	3	2	1	0	Nebraska	9	17	23	8
Colorado	14	9	4	9	New Mexico	3	1	0	0
Illinois	7	51	45	32	North Dakota	0	25	4	1
Indiana	1	2	27	49	Ohio	6	83	19	57
Iowa	0	48	19	9	South Dakota	0	11	6	7
Kansas	2	26	37	2	Wisconsin	1	58	19	14
Michigan	9	63	16	24	Wyoming	0	1	2	2
Minnesota	0	37	11	19					
Missouri	1	26	11	14	Total	58	472	254	248
Montana	2	12	10	1	Percentage	5.62	45.73	24.61	24.03

Table 70 shows the offerings in French. Only 179 schools, or 17.34 per cent of the total number accredited, included this subject in the program of studies in 1917. Not a school in North Dakota, South Dakota, or Wyoming offered it. On the other hand, each of the four schools in New Mexico offered it; and a fairly goodly number in Illinois, Michigan, Missouri, and Ohio made provision for it. Of the schools which taught the subject, 77, or 7.46 per cent, provided a two-year course; 58, or 5.62 per cent, a three-year course; and 44, or 4.26 per cent, a four-year course. Ten small schools, 38 medium schools, and 131 large schools offered the work.[2]

TABLE 70.—*Offerings in French.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	Two units.	Three units.	Four units.		None.	Two units.	Three units.	Four units.
Arizona	3	3	0	0	Nebraska	48	2	3	4
Colorado	28	4	4	0	New Mexico	0	0	0	4
Illinois	101	15	10	9	North Dakota	30	0	0	0
Indiana	72	6	1	0	Ohio	129	2	25	9
Iowa	71	3	2	0	South Dakota	24	0	0	0
Kansas	63	3	1	0	Wisconsin	84	7	0	1
Michigan	82	23	6	1	Wyoming	5	0	0	0
Minnesota	53	6	2	6					
Missouri	37	2	3	10	Total	853	77	58	44
Montana	23	1	1	0	Percentage	82.65	7.46	5.62	4.26

Table 71 shows the offerings in Spanish. Of the entire number of schools 234, or 22.67 per cent included it in the program of studies in 1917, being 55 more schools than were offering French. All the accredited schools in Arizona and New Mexico offered it, as did also a relatively large number of schools in Illinois and Ohio. Of the schools teaching the subject, 38, or 3.68 per cent, offered it for one year; 155, or 15.01 per cent, for two years; and 41, or 3.97 per cent for three years.[1]

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[1] Indeed, a more recent study made by the association (1919) shows that at that time 926 of the accredited schools had eliminated the subject entirely and that 89 others had reduced the amount offered.

[2] In 1919 the reports show 579 schools had introduced French.

TABLE 71.—*Offerings in Spanish.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	One unit.	Two units.	Three units.		None.	One unit.	Two units.	Three units.
Arizona	0	0	3	3	Nebraska	51	2	3	1
Colorado	19	4	11	2	New Mexico	0	0	0	4
Illinois	49	7	73	6	North Dakota	30	0	0	0
Indiana	69	7	3	0	Ohio	129	2	25	9
Iowa	66	2	8	0	South Dakota	22	0	2	0
Kansas	58	7	2	0	Wisconsin	86	0	4	2
Michigan	98	3	9	2	Wyoming	5	0	0	0
Minnesota	62	2	2	1					
Missouri	35	2	6	9	Total	798	38	155	41
Montana	19	0	4	2	Percentage	77.32	3.68	15.01	3.97

Table 72 shows the offerings in ancient history. Only 42 schools, or 4.07, per cent of all, make no provision whatever for this subject; while 50, or 4.84 per cent, offer but one-half unit in it. It is, however, almost a universal practice to offer the subject for one entire year, since 940, or 91.08 per cent of the schools, report that such is their custom.

TABLE 72.—*Offerings in ancient history.*

State.	Number of schools offering—			State.	Number of schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	0	0	6	Nebraska	1	7	49
Colorado	0	0	36	New Mexico	1	0	3
Illinois	14	2	119	North Dakota	0	2	28
Indiana	0	2	77	Ohio	20	23	122
Iowa	2	5	69	South Dakota	1	0	23
Kansas	2	0	65	Wisconsin	0	4	88
Michigan	1	1	110	Wyoming	0	0	5
Minnesota	0	1	66				
Missouri	0	2	50	Total	42	50	940
Montana	0	1	24	Percentage	4.07	4.84	91.08

Table 73 shows the offerings in medieval and modern history. Ninety-nine schools, or 9.59 per cent, do not teach the subject; 57, or 5.52 per cent, offer it for one-half year; 869, or 84.20 per cent, offer it for one year; and 7, or 0.67 per cent, offer it for one year and a half. The subject is therefore nearly universally accepted as a high-school constant The three States—Illinois, with 34 schools, Nebraska with

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[1] In 1919 Spanish had been introduced by 292 schools.

17 schools, and Ohio with 19 schools—are the ones that lead in the neglect of the subject.

TABLE 73.—*Offerings in medieval and modern history.*

State.	Number of schools offering— None.	One-half unit.	One unit.	One and one-half units.	State.	Number of schools offering— None.	One-half unit.	One unit.	One and one-half units.
Arizona	0	0	5	1	Nebraska	17	12	28	0
Colorado	2	0	34	0	New Mexico	0	0	4	0
Illinois	34	3	97	1	North Dakota	39	4	23	0
Indiana	7	0	71	1	Ohio	19	16	128	2
Iowa	8	6	62	0	South Dakota	0	0	24	0
Kansas	5	0	61	1	Wisconsin	1	13	77	1
Michigan	2	0	110	0	Wyoming	0	0	5	0
Minnesota	0	2	65	0					
Missouri	0	1	51	0	Total	99	57	869	7
Montana	1	0	24	0	Percentage	9.59	5.52	84.20	0.67

Table 74 gives the offerings in English history. More than half the schools do not include this subject in their curricula, the exact number that omit it being 588, or 56.97 per cent of the whole. Of the others, 183, or 17.73 per cent, offer a course for a single semester, and 261, or 25.29 per cent, give a course for an entire year. The States in which the subject is, proportionately, least regarded are Arizona and Kansas; the ones in which it is most highly encouraged are Colorado, Illinois, Missouri, Montana, and Wyoming.

TABLE 74.—*Offerings in English history.*

State.	Number of schools offering— None.	One-half unit.	One unit.	State.	Number of schools offering— None.	One-half unit.	One unit.
Arizona	5	1	0	Nebraska	34	17	6
Colorado	16	10	10	New Mexico	2	1	1
Illinois	49	24	62	North Dakota	21	7	2
Indiana	52	14	13	Ohio	100	31	34
Iowa	48	17	11	South Dakota	16	5	3
Kansas	58	0	9	Wisconsin	56	24	12
Michigan	58	9	45	Wyoming	2	2	1
Minnesota	45	13	9				
Missouri	16	6	30	Total	588	183	261
Montana	10	2	13	Percentage	56.97	17.73	25.29

Table 75 gives the offerings in American history and civics. Perhaps the most striking fact here disclosed is that 50 schools, or 4.84 per cent, do not offer the subject at all; and that of these 50 schools, 39 are in Illinois. Nineteen other schools, or 1.84 per cent of the entire number, offer but one-half year's course; 768, or 74.42 per cent, offer a full year's course; 180, or 17.44 per cent, offer a course for a year and a half; and 15, or 1.45 per cent, offer a course for a full two years. Every school in Arizona, Indiana, Iowa, Michigan, Missouri, Montana, North Dakota, New Mexico, South Dakota, and Wyoming makes some provision for this subject. So does every school except one in each of the following States: Colorado, Kansas, Nebraska, and Wisconsin.

TABLE 75.—*Offerings in American history and civics.*

State.	Number of schools offering— None.	One-half unit.	One-unit.	One and one-half units.	Two units.	State.	Number of schools offering— None.	One-half unit.	One unit.	One and one-half units.	Two units.
Arizona	0	0	3	3	0	Nebraska	1	3	40	12	1
Colorado	1	0	34	1	0	New Mexico	0	0	4	0	0
Illinois	39	1	74	18	3	North Dakota	0	0	30	0	0
Indiana	0	3	67	7	2	Ohio	4	2	150	7	2
Iowa	0	0	65	10	1	South Dakota	0	1	23	0	0
Kansas	1	0	15	51	0	Wisconsin	1	0	44	47	0
Michigan	0	0	102	8	2	Wyoming	0	0	2	0	3
Minnesota	3	3	58	2	1						
Missouri	0	5	33	14	0	Total	50	19	768	180	15
Montana	0	1	24	0	0	Percentage	4.84	1.84	74.42	17.44	1.45

Table 76 shows the offerings in algebra. Seventy-eight per cent (805 schools) of all the schools of the association offer this subject for a period of one and one-half years. Eighty-one, or 7.84 per cent, offer it for a period of one year, and 146, or 14.14 per cent, offer it for two years. The one-unit ideal prevails to the greatest extent in Illinois, North Dakota, South Dakota, and Wisconsin. The two-unit ideal seems to find greatest support in Colorado, Kansas, Missouri, and Ohio. Thirty of the 81 schools offering but a single unit in algebra are of the small group, whereas but 18 of the 146 schools which offer two units of the subject are of that group. Every school in the association makes some provision for the subject.

TABLE 76.—*Offerings in algebra.*

State.	Number of schools offering— 1 unit.	1½ units.	2 units.	State.	Number of schools offering— 1 unit.	1½ units.	2 units.
Arizona	1	5	0	Nebraska	3	54	0
Colorado	4	22	10	New Mexico	0	4	0
Illinois	18	109	8	North Dakota	8	22	0
Indiana	1	67	11	Ohio	5	131	29
Iowa	1	68	7	South Dakota	5	19	0
Kansas	0	16	51	Wisconsin	26	61	5
Michigan	0	104	8	Wyoming	0	4	1
Minnesota	3	62	2				
Missouri	5	33	14	Total	81	805	146
Montana	1	24	0	Percentage	7.84	78.00	14.14

Table 77 shows the offerings in geometry. As in the case of algebra, every school offers some work in the subject, 175, or 16.95 per cent, providing a one-unit course, and 857, or 83.04 per cent, offering two units. A large percentage of the schools in Indiana, North Dakota, and Wisconsin seem to prefer the single unit plan; elsewhere the ideal of a unit and one-half prevails.

TABLE 77.—*Offerings in geometry.*

State.	Number of schools offering—		State.	Number of schools offering—	
	1 unit.	1½ units.		1 unit.	1½ units.
Arizona	1	5	Nebraska	8	49
Colorado	0	36	New Mexico	0	4
Illinois	15	120	North Dakota	12	18
Indiana	49	30	Ohio	9	156
Iowa	9	67	South Dakota	7	17
Kansas	5	62	Wisconsin	41	51
Michigan	2	110	Wyoming	0	5
Minnesota	11	56			
Missouri	5	47	Total	175	857
Montana	1	24	Percentage	16.95	83.04

Table 78 shows the offerings in trigonometry. Only 357 schools, or 34.6 per cent, offer the subject, and these do so for one-half year. More than 65 per cent of the schools (675) do not offer the subject at all. In one State, North Dakota, the subject is not found in a single school. Few of the small schools in any of the States make provision for it, and only a relatively small number of medium schools do so. The exceptions to this statement are the schools in Michigan, Missouri, and Montana.

TABLE 78.—*Offerings in trigonometry.*

State.	Number of schools offering—		State.	Number of schools offering—	
	None.	½ unit.		None.	½ unit.
Arizona	1	5	Nebraska	47	10
Colorado	22	14	New Mexico	2	2
Illinois	78	57	North Dakota	30	0
Indiana	44	35	Ohio	124	41
Iowa	63	13	South Dakota	19	5
Kansas	60	7	Wisconsin	79	13
Michigan	32	80	Wyoming	4	1
Minnesota	57	10			
Missouri	7	45	Total	675	357
Montana	6	19	Percentage	65.40	34.60

Table 79 shows the offerings in physics. This subject, until recently commonly prescribed for admission to almost all colleges and universities, seems to have a secure place in all but 19 of the accredited schools. Of the 1,013 schools which include the subject in their program of study, 990, or 95.93 per cent, offer it for one year; 15, or 1.45 per cent, offer it for a year and a half; and only 8, or 0.77 per cent, offer it for a period of two years.

TABLE 79.—*Offerings in physics.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	One unit.	One and one-half units.	Two units.		None.	One unit.	One and one-half units.	Two units.
Arizona	0	6	0	0	Nebraska	0	56	1	0
Colorado	0	36	0	0	New Mexico	0	4	0	0
Illinois	1	129	4	1	North Dakota	3	27	0	0
Indiana	3	71	5	0	Ohio	5	158	0	2
Iowa	0	75	0	1	South Dakota	0	24	0	0
Kansas	1	66	0	0	Wisconsin	0	91	1	0
Michigan	1	110	0	1	Wyoming	0	4	0	1
Minnesota	2	64	0	1					
Missouri	3	44	4	1	Total	19	990	15	8
Montana	0	25	0	0	Percentage	1.84	95.93	1.45	0.77

Table 80 shows the offerings in chemistry. No provision for the study is made by 185 schools, or 17.92 per cent, whereas 786, or 76.16 per cent, offer it for one year; 47, or 4.55 per cent, for a year and a half; and 14, or 1.35 per cent, for two years. Iowa, Kansas, South Dakota, and Wisconsin are the four States which give least attention to the subject.

TABLE 80.—*Offerings in chemistry.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	One unit.	One and one-half units.	Two units.		None.	One unit.	One and one-half units.	Two units.
Arizona	0	6	0	0	Nebraska	12	45	0	0
Colorado	0	32	1	3	New Mexico	0	3	0	1
Illinois	9	115	8	3	North Dakota	3	27	0	0
Indiana	18	57	4	0	Ohio	0	135	28	2
Iowa	38	37	0	1	South Dakota	8	16	0	0
Kansas	35	32	0	0	Wisconsin	41	51	0	0
Michigan	1	108	0	3	Wyoming	0	4	0	1
Minnesota	1	66	0	0					
Missouri	17	29	6	0	Total	185	786	47	14
Montana	2	23	0	0	Percentage	17.92	76.16	4.55	1.35

Table 81 shows the offerings in botany. Nearly one-third of the schools (311, or 30.13 per cent) do not teach the subject; 365, or 35.37 per cent, offer it for one-half year; 326, or 31.58 per cent, offer it for a full year; and 30, or 2.90 per cent, offer it for a year and a half. The States in which the subject is conspicuous because of its less frequent appearance are Arizona, Missouri, New Mexico, Ohio, and Wyoming. On the other hand. Minnesota stresses the subject more than any other State.

TABLE 81.—*Offerings in botany.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	One-half unit.	One unit.	One and one-half units.		None.	One-half unit.	One unit.	One and one-half units
Arizona	6	0	0	0	Nebraska	2	48	7	0
Colorado	13	16	7	0	New Mexico	3	1	0	0
Illinois	12	77	40	6	North Dakota	7	11	12	0
Indiana	15	4	58	2	Ohio	98	51	14	2
Iowa	27	34	15	0	South Dakota	11	6	7	0
Kansas	28	1	38	0	Wisconsin	16	31	43	2
Michigan	19	38	55	0	Wyoming	4	1	0	0
Minnesota	6	26	17	18					
Missouri	35	11	6	0	Total	311	365	326	30
Montana	9	9	7	0	Percentage	30.13	35.37	31.58	2.90

Table 82 shows the offerings in zoology. This subject seems not to be valued very highly as a branch of instruction in secondary schools, as 727, or 70.44 per cent, of the schools do not include it at all in the programs of study. Of the others, 218, or 21.11 per cent, offer it for one-half year; 79, or 7.65 per cent, offer it for one year; and 8, or 0.77 per cent, offer it for a year and a half. The only States which seem to give it nearly equal recognition with other sciences are Colorado, Illinois, Iowa, and possibly Minnesota.

TABLE 82.—*Offerings in zoology.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	One-half unit.	One unit.	One and one-half units.		None.	One-half unit.	One unit.	One and one-half units.
Arizona	6	0	0	0	Nebraska	47	8	2	0
Colorado	17	17	2	0	New Mexico	3	0	1	0
Illinois	16	76	36	7	North Dakota	17	10	3	0
Indiana	65	6	7	1	Ohio	139	19	7	0
Iowa	43	26	7	0	South Dakota	19	3	2	0
Kansas	59	3	5	0	Wisconsin	80	10	2	0
Michigan	103	8	1	0	Wyoming	5	0	0	0
Minnesota	47	18	2	0					
Missouri	43	7	2	0	Total	727	218	79	8
Montana	18	7	0	0	Percentage	70.44	21.11	7.65	0.77

Table 83 shows the offerings in general biology. Here again only a very small number of schools make provision for the subject, only 200, or 19.32 per cent, offering it in any form. No doubt the schools which offer separate courses in botany and zoology rarely offer also a course in general biology. The fairest way, therefore, to judge of the extent of offerings in the biological sciences would be to combine the figures of the three groups. Adopting this plan the figures would show conditions as revealed in Table 84.

Arizona, Michigan, and Ohio take the lead in making provision for courses in general biology.

TABLE 83.—*Offerings in general biology.*

State.	Number of schools offering—			State.	Number of schools offering—		
	None.	One unit.	One and one-half units.		None.	One unit.	One and one-half units.
Arizona	2	4	0	Nebraska	56	1	0
Colorado	25	11	0	New Mexico	3	1	0
Illinois	125	8	2	North Dakota	29	1	0
Indiana	74	5	0	Ohio	113	52	0
Iowa	61	15	0	South Dakota	23	1	0
Kansas	64	3	0	Wisconsin	77	14	1
Michigan	58	54	0	Wyoming	2	2	1
Minnesota	53	14	0				
Missouri	46	6	0	Total	832	196	4
Montana	21	4	0	Percentage	80.62	18.99	0.33

TABLE 84.—*Summary of offerings in biological science.*

	One-half unit.	One unit.	One and one-half units.	Total.
Schools offering botany	365	326	30	721
Schools offering zoology	218	79	8	305
Schools offering general biology	0	196	4	200
Total	583	601	42	1,226

Table 85 shows the offerings in physiology. No provision for the subject is made by 480 schools, or 46.51 per cent; 484, or 46.89 per cent, offer work to the extent of a half unit; and 68, or 6.58 per cent, offer a full year's study. Illinois, Iowa, Kansas, Nebraska, and Wisconsin give the most attention to the subject; whereas Arizona, Missouri, Montana, Ohio, and Wyoming give little place to it. Considered in accordance with the size of the school, the numbers in which the subject is not offered at all are: Large schools, 92; medium schools, 265; small schools, 123.

TABLE 85.—*Offerings in physiology.*

State.	Number of schools offering—			State.	Number of schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	5	1	0	Nebraska	23	32	2
Colorado	26	10	0	New Mexico	2	2	0
Illinois	35	88	12	North Dakota	13	16	1
Indiana	53	15	9	Ohio	109	48	8
Iowa	9	66	1	South Dakota	12	11	1
Kansas	2	58	7	Wisconsin	27	60	5
Michigan	63	44	5	Wyoming	5	0	0
Minnesota	35	29	3				
Missouri	38	1	13	Total	480	484	68
Montana	21	3	1	Percentage	46.51	46.89	6.58

Table 86 shows the offerings in physical geography. The study is not offered at all by 446 schools, or 43.21 per cent; 419, or 40.60 per cent, offer it for a half year; and 167, or 16.18 per cent, only offer it for a full year. Illinois, Michigan, Ohio, and Wisconsin give most attention to the subject; whereas Kansas, Missouri, and New Mexico give least.

TABLE 86.—*Offerings in physical geography.*

State.	Number of schools offerings—			State.	Number of schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	3	2	1	Nebraska	29	28	0
Colorado	21	12	3	New Mexico	3	1	0
Illinois	28	87	20	North Dakota	9	15	6
Indiana	35	24	20	Ohio	66	75	24
Iowa	33	41	2	South Dakota	5	17	2
Kansas	56	9	2	Wisconsin	33	38	21
Michigan	36	37	39	Wyoming	3	0	2
Minnesota	29	27	11				
Missouri	46	0	6	Total	446	419	167
Montana	11	6	8	Percentage	43.21	40.60	16.18

Table 87 shows the offerings in geology. Very few schools give this subject an independent place in the program of studies, 956, or 92.63 per cent, not recognizing it at all; 58, or 5.6 per cent, offering it for a half year; and 18, or 1.74 per cent, offering it for a full year. Colorado and Missouri give most attention to it.

TABLE 87.—*Offerings in geology.*

State.	Number of schools offering—			State.	Number of schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	5	1	0	Nebraska	55	2	0
Colorado	28	8	0	New Mexico	4	0	0
Illinois	125	7	3	North Dakota	28	2	0
Indiana	79	0	0	Ohio	145	17	3
Iowa	75	1	0	South Dakota	22	2	0
Kansas	66	1	0	Wisconsin	87	2	3
Michigan	103	2	7	Wyoming	5	0	0
Minnesota	66	1	0				
Missouri	40	11	1	Total	956	58	18
Montana	23	1	1	Percentage	92.63	5.62	1.74

Table 88 shows the offerings in general science. Nearly one-half the schools offer this study; 189, or 18.31 per cent, offering it for a half year; and 345, or 33.43 per cent, for an entire year. Nevertheless, 498 schools, or 48.25 per cent, do not offer it at all. In Colorado, Iowa, Kansas, Montana, Nebraska, New Mexico, South Dakota, Wisconsin, and Wyoming more than 50 per cent of the schools include the subject in their curricula. Considered in respect to size of school, the ones not offering the subject are: Large schools, 119; medium schools, 260; small schools, 119.

Table 88.—*Offerings in general science.*

State.	Number of schools offering—			State.	Number of schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	3	0	3	Nebraska	18	31	8
Colorado	10	3	23	New Mexico	0	2	2
Illinois	67	19	49	North Dakota	15	8	7
Indiana	53	4	22	Ohio	89	21	55
Iowa	26	29	21	South Dakota	8	12	4
Kansas	16	11	40	Wisconsin	36	28	28
Michigan	62	10	40	Wyoming	2	0	3
Minnesota	40	8	19				
Missouri	42	0	10	Total	498	189	345
Montana	11	3	11	Percentage	48.25	18.31	33.43

Table 89 shows the offerings in sociology. Only 41 schools claim to offer a separate and distinct course in the subject.

Table 89.—*Offerings in sociology.*

State.	Number of schools offering—			State.	Number of schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	6	0	0	Nebraska	57	0	0
Colorado	36	0	0	New Mexico	4	0	0
Illinois	126	7	2	North Dakota	30	0	0
Indiana	77	2	0	Ohio	153	7	5
Iowa	74	2	0	South Dakota	22	2	0
Kansas	67	0	0	Wisconsin	87	4	1
Michigan	110	2	0	Wyoming	5	0	0
Minnesota	63	3	1				
Missouri	49	3	0	Total	991	32	9
Montana	25	0	0	Percentage	96.02	3.10	0.87

Table 90 shows the offerings in economics. It is, perhaps, surprising to most persons to learn that nearly half of the schools in the association include this subject in their program of studies. Thirty-nine, or 3.77 per cent, offer the study for an entire year; 455, or 44.08 per cent, offer it for one-half year; while 538, or 52.13 per cent, omit it altogether. Every school in Iowa offers a course in the subject, and more than half of the schools in Colorado, Illinois, Minnesota, Missouri, Montana, and Wisconsin make some provision for it. On the other hand, a relatively small number of schools do so in Indiana, Michigan, Nebraska, and New Mexico.

TABLE 90.—*Offerings in economics.*

State.	Schools offering—			State.	Schools offering.		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	4	2	0	Nebraska	44	12	1
Colorado	17	18	1	New Mexico	3	1	0
Illinois	50	79	6	North Dakota	15	15	0
Indiana	65	12	2	Ohio	97	61	7
Iowa	0	74	2	South Dakota	13	10	1
Kansas	37	22	8	Wisconsin	41	47	4
Michigan	77	33	2	Wyoming	3	1	1
Minnesota	22	44	1				
Missouri	25	24	3	Total	523	469	40
Montana	10	14	1	Percentage	52.13	44.08	3.77

Table 91 shows the offerings in public speaking. Here again it is doubtless contrary to general impression that nearly one-third of the schools (30.33 per cent) make definite offerings in the subject. Seventeen schools offer one-fourth of a unit of work; 56 offer one-half unit of work; 114 offer a full unit; and 26 offer two units. The States in which the subject is found most extensively are Indiana and Minnesota.

TABLE 91.—*Offerings in public speaking.*

State.	Number of schools offering—				
	None.	One-fourth unit.	One-half unit.	One unit.	Two units.
Arizona	4	0	2	0	0
Colorado	25	2	14	5	0
Illinois	95	1	17	16	6
Indiana	38	3	17	15	6
Iowa	52	2	12	9	1
Kansas	52	1	10	4	0
Michigan	84	2	9	16	1
Minnesota	34	0	16	13	4
Missouri	46	0	1	2	3
Montana	12	1	8	4	0
Nebraska	42	0	11	4	0
New Mexico	4	0	0	0	0
North Dakota	21	0	5	3	1
Ohio	124	3	19	17	2
South Dakota	12	0	11	1	0
Wisconsin	71	1	14	4	2
Wyoming	3	1	0	1	0
Total	719	17	156	114	26
Percentage	69.67	1.64	15.11	11.04	2.51

Table 92 shows the average number of academic units which are offered in the three types of schools—large, medium, and small—in each State, and the average for all types of schools combined. The range in the large schools is from 23 to 44; in the medium schools from 17 to 34; in the small schools from 14 to 47; and in all types combined from 18 to 35.

TABLE 92.—*Average of academic units offered by the three types of school.*

State.	Large.	Medium.	Small.	All combined.
Arizona	44	26	47	32
Colorado	31	22	21	24
Indiana	26	23	21	29
Illinois	28	22	21	24
Iowa	25	21	20	22
Kansas	23	21	14	20
Michigan	28	21	18	23
Minnesota	29	21	19	22
Missouri	32	21	19	24
Montana	25	24	21	23
Nebraska	37	20	16	19
New Mexico	....	34	28	29
North Dakota	27	21	19	20
Ohio	27	21	20	23
South Dakota	32	22	20	21
Wisconsin	24	17	17	18
Wyoming	....	31	38	35

Table 93 gives a complete summary of the offerings, in percentages, of academic subjects.

TABLE 93.—*Curricular offerings in academic subjects.*

Subject.	Percentages of schools offering—							
	No units.	One-half unit.	One-unit.	One and one-half units.	Two units.	Three units.	Four units.	Over four units.
English	0.00	0.00	0.00	0.00	0.00	8.33	85.17	6.49
Latin	2.32	....	....	....	8.52	8.43	80.71	....
Greek	96.41	....	....	....	3.59	....	....	....
German	5.62	....	....	....	45.73	24.61	24.03	....
French	82.65	....	....	....	7.46	5.62	4.26	....
Spanish	77.32	....	3.68	....	15.01	3.97	....	....
Ancient history	4.07	4.84	91.08	....	....	....	....	....
Medieval and modern history	9.59	5.52	84.20	.67	....	....	....	....
English history	56.97	17.73	25.29	....	....	....	....	....
American history and civics	4.84	1.84	74.42	17.44	1.45	....	....	....
Algebra	.00	.00	7.84	78.00	14.14	....	....	....
Geometry	.00	.00	16.95	83.04	....	....	....	....
Trigonometry	65.40	34.60	....	....	....	....	....	....
Physics	1.84	.00	95.93	1.45	.77	....	....	....
Chemistry	17.92	.00	76.16	4.55	1.35	....	....	....
Botany	30.13	35.37	31.58	2.90	....	....	....	....
Zoology	70.44	21.11	7.65	.77	....	....	....	....
General biology	80.62	....	18.99	.33	....	....	....	....
Physiology	46.51	46.89	6.58	....	....	....	....	....
Physical geography	43.21	40.60	16.18	....	....	....	....	....
Geology	92.63	5.62	1.74	....	....	....	....	....
General science	48.25	18.31	33.43	....	....	....	....	....
Sociology	96.02	3.10	.87	....	....	....	....	....
Economics	52.13	44.08	3.77	....	....	....	....	....
Public speaking	69.67	16.75	11.04	2.51	....	....	....	....

Table 94 shows the offerings in art. Exactly 600 schools, or 58.13 per cent, make no provision for the subject; 218 schools, or 21.12 per cent, offer less than one unit of the work; 144 schools, or 13.95 per cent, offer from one to three units of work; and 70 schools, or 6.78 per cent, offer more than three units. Schools that provide less than a unit in the work can scarcely be giving more than incidental attention to it, and not any thoroughly systematized instruction of a contin-

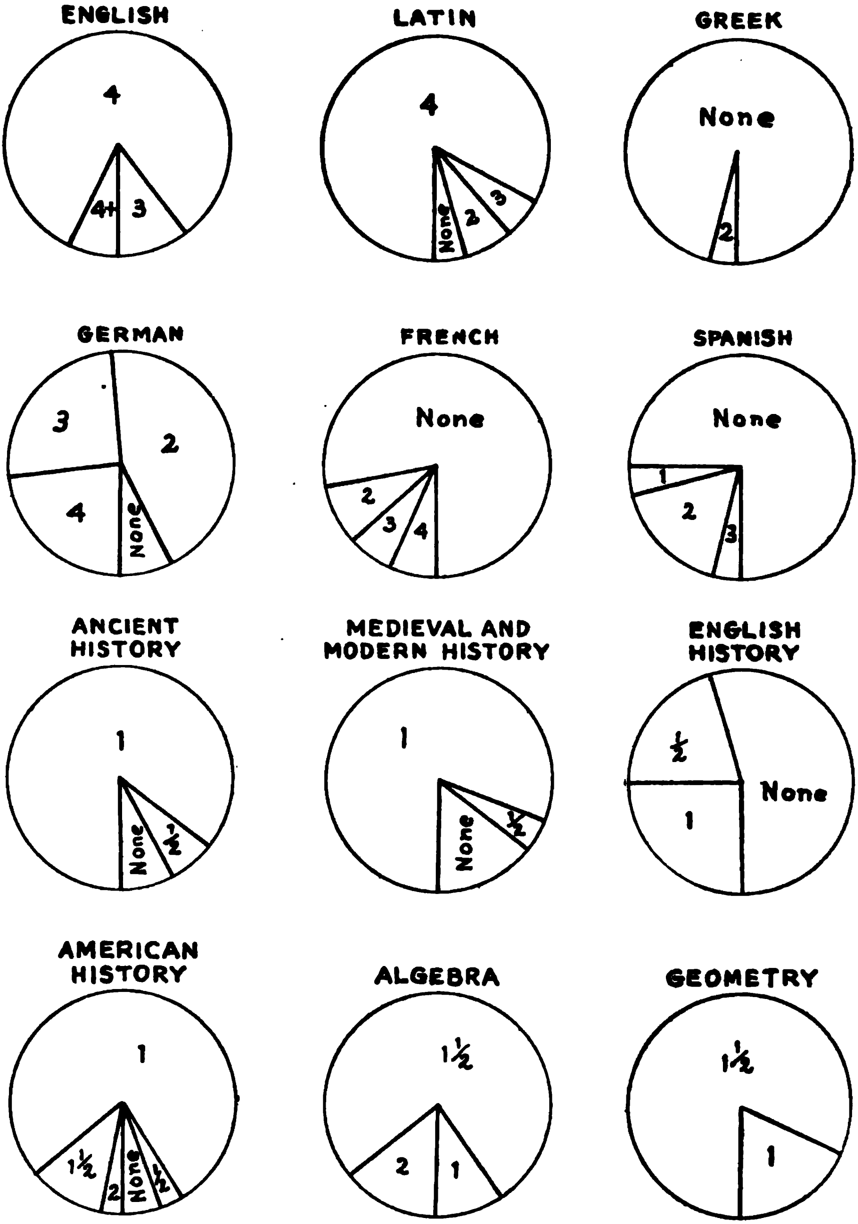


Chart XXXIV.—Shows graphically the facts revealed in Tables 66-77, namely, the extent of some of the so-called academic offerings of the Programs of Study, in units.

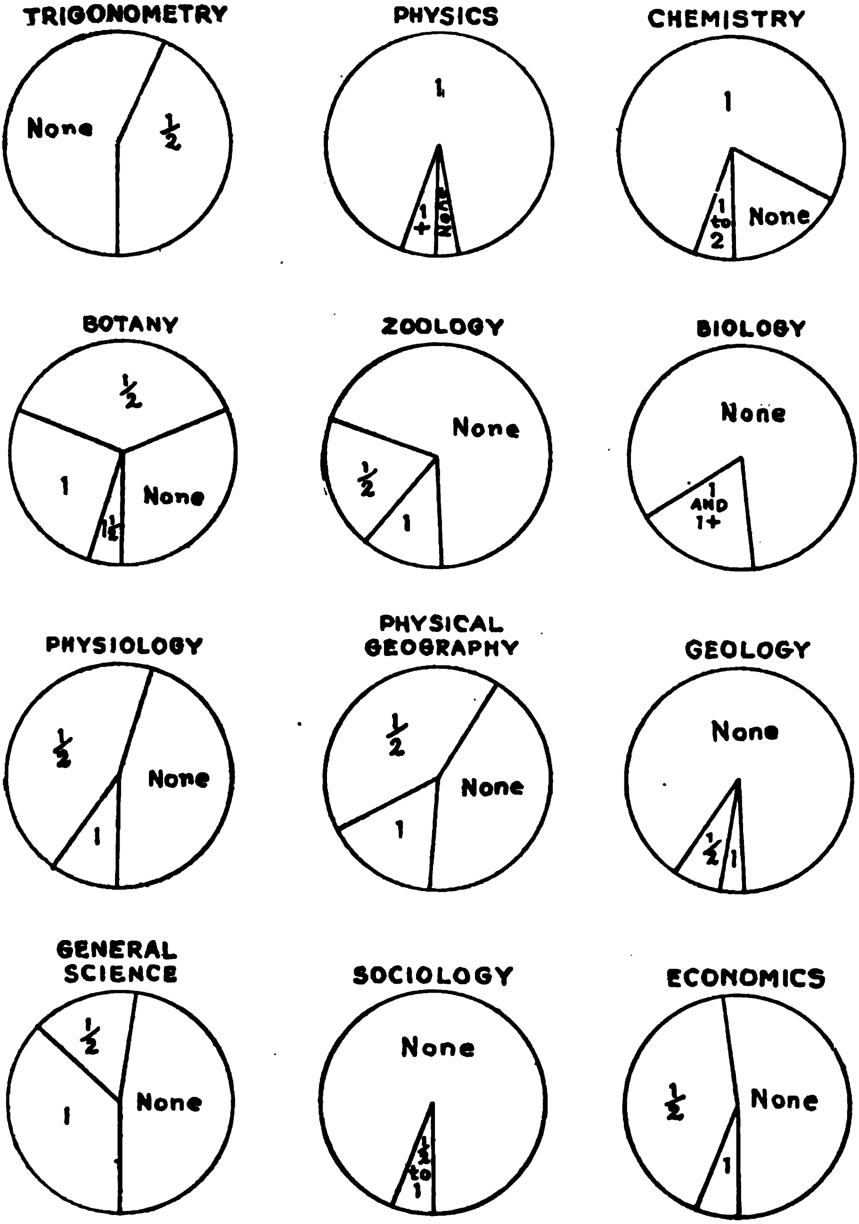


CHART XXXV.—Shows graphically the facts revealed in Tables 78–90, namely, the extent of the offerings of additional so-called academic subjects in the Program of Studies, in units.

uous character. If this be true, the 218 schools which acknowledge giving credit for less than a unit's work might perhaps fairly be added to those offering no work in the subject. If so, the number of schools not teaching the subject would be 818, or 79.26 per cent of all. In Arizona, Illinois, Indiana, and Wyoming more than half the schools provide some instruction in the subject. On the other hand, in Kansas, Nebraska, and New Mexico very few schools give recognition to the study.

TABLE 94.—*Offerings in art.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	Less than one unit.	One to three units.	More than three units.		None.	Less than one unit.	One to three units.	More than three units.
Arizona	1	3	2	0	Nebraska	53	2	1	1
Colorado	20	13	3	0	New Mexico	3	1	0	0
Illinois	53	35	28	19	North Dakota	23	6	1	0
Indiana	8	45	19	7	Ohio	99	16	31	19
Iowa	59	12	5	0	South Dakota	16	6	1	1
Kansas	54	8	4	1	Wisconsin	73	11	6	2
Michigan	57	32	18	5	Wyoming	2	2	1	0
Minnesota	36	16	6	9					
Missouri	30	7	10	5	Total	600	218	144	70
Montana	13	3	8	1	Percentage	58.13	21.12	13.95	6.78

Table 95 shows the offerings in music. No provision whatever for credit for work done in the subject is made by 384 schools, or 37.20 per cent; 425, or 41.18 per cent, allow credit to be gained to the extent of less than one unit; 187, or 18.12 per cent, provide from one to three units work; and 36, or 3.48 per cent, make offerings in excess of three units. It is scarcely believable that the schools that give less than a unit's credit in the subject really offer music of any different character than incidental chorus, or orchestral, or glee work. Hence it seems fair to include these 425 schools with those confessing to offering no class work in the subject whatever. On this assumption the results would leave only 223 schools, or 21.68 per cent, of the whole number, which make any real pretense of giving creditable instruction in the subject.

TABLE 95.—*Offerings in music.*

State.	Number of schools offering—				State.	Number of schools offering—			
	None.	Less than one unit.	One to three units.	Over three units.		None.	Less than one unit.	One to three units.	Over three units.
Arizona	0	3	2	1	Nebraska	25	22	7	3
Colorado	11	24	1	0	New Mexico	1	3	0	0
Illinois	46	58	25	6	North Dakota	3	22	5	0
Indiana	5	51	20	3	Ohio	78	23	54	10
Iowa	36	28	10	2	South Dakota	10	12	2	0
Kansas	21	31	13	2	Wisconsin	60	25	6	1
Michigan	33	65	11	3	Wyoming	1	2	2	0
Minnesota	20	33	12	2					
Missouri	25	18	7	2	Total	384	425	187	36
Montana	9	5	10	1	Percentage	37.20	41.18	18.12	3.48

Table 96 shows the offerings in agriculture. No provision whatever for the subject is made by 428 schools, or 41.46 per cent; 163, or 15.79 per cent, offer one-half unit's work; 246, or 23.83 per cent, offer one unit's work; 78, or 7.54 per cent, offer two units' work; 42, or 4.06 per cent, offer three units' work; and 75, or 7.26 per cent, offer four units' work. Most of the schools in Iowa, Kansas, Nebraska, and Minnesota include some work of this kind in their programs of study; and approximately half of the schools of Indiana, New Mexico, Ohio, and South Dakota give some attention to it. Of the States which do provide for the teaching of the subject, Minnesota leads all others in the extent of the offerings, 24 schools providing a four years' course, and 11 others a three years' course. Considered from the standpoint of the size of the schools, the tables show that 148, or 36.7 per cent, of the large schools; 178, or 68.1 per cent, of the medium schools; and 137, or 57.3 per cent, of the small schools make some provision for the work.

TABLE 96.—*Offerings in agriculture.*

State.	Schools offering—					
	None.	One-half unit.	One unit.	Two units.	Three units.	Four units.
Arizona	4	0	1	0	1	0
Colorado	24	2	7	1	1	1
Illinois	84	4	21	21	2	3
Indiana	41	3	26	8	1	0
Iowa	6	35	33	0	0	2
Kansas	3	5	54	4	0	1
Michigan	64	8	8	10	8	14
Minnesota	20	2	2	8	11	24
Missouri	19	0	32	1	0	0
Montana	15	1	6	0	0	3
Nebraska	4	26	9	5	8	5
New Mexico	2	1	1	0	0	0
North Dakota	17	1	6	2	0	4
Ohio	54	58	34	13	4	2
South Dakota	8	5	5	4	1	1
Wisconsin	58	12	1	1	5	15
Wyoming	5	0	0	0	0	0
Total	428	163	246	78	42	75
Percentage	41.46	15.79	23.83	7.54	4.06	7.26

Table 97 shows the offerings in cooking. All but 172 schools, or 16.66 per cent, make provision of some sort for this subject, 538 schools, or 52.13 per cent, offering it for one year; 264, or 25.58 per cent, offering it for two years; and 58, or 5.62 per cent, offering it for a longer period than two years. In Michigan, Ohio, and South Dakota approximately one-third of the schools do not include the work in the program of studies. In Arizona, Iowa, Kansas, Minnesota, Montana, New Mexico, North Dakota, and Wyoming, on the other hand, the subject is to be found in nearly every school. Every large school in the association, except 21, makes provision for the work. Of the medium schools, 80 omit the subject, and of the small schools, 70 do not include it.

Only 28 large schools in the association omit the subject from their curricula.

TABLE 99.—*Offerings in manual training.*

State.	Number of schools offering—				
	None.	One unit.	Two units.	Three units.	Four units.
Arizona	1	1	3	0	1
Colorado	8	15	7	2	4
Illinois	18	25	54	8	30
Indiana	12	18	28	13	8
Iowa	8	17	33	10	8
Kansas	2	10	35	15	5
Michigan	32	24	31	5	20
Minnesota	2	5	27	10	23
Missouri	13	10	21	2	6
Montana	5	3	5	2	10
Nebraska	14	22	18	0	3
New Mexico	0	3	1	0	0
North Dakota	1	10	15	3	1
Ohio	74	38	32	9	12
South Dakota	5	6	8	2	3
Wisconsin	26	2	37	6	21
Wyoming	2	0	3	0	0
Total	223	209	358	87	155
Percentage	21.60	20.25	34.69	8.43	15.01

Tables 100–104 show the offerings in commercial work.

In bookkeeping, 189 schools, or 18.31 per cent, make no provision whatever; 432, or 41.86 per cent, offer the subject for one year; 370, or 35.85 per cent, offer it for two years; 36, or 3.48 per cent, offer it for three years; and only 5, or 0.48 per cent, offer it for four years. More than three-fourths of the schools, therefore, or 77.71 per cent, offer the subject for a year or two years.

TABLE 100.—*Offerings in bookkeeping.*

State.	Number of schools offering—				
	None.	One unit.	Two units.	Three units.	Four units.
Arizona	0	2	3	1	0
Colorado	6	14	16	0	0
Illinois	18	48	63	4	2
Indiana	15	33	29	2	0
Iowa	10	44	21	1	0
Kansas	14	25	28	0	0
Michigan	10	38	59	5	0
Minnesota	8	24	34	1	0
Missouri	18	19	15	0	0
Montana	1	8	14	2	0
Nebraska	13	35	8	1	0
New Mexico	0	3	1	0	0
North Dakota	7	21	2	0	0
Ohio	48	49	46	19	3
South Dakota	9	9	6	0	0
Wisconsin	12	58	22	0	0
Wyoming	0	2	3	0	0
Total	189	432	370	36	5
Percentage	18.31	41.86	35.85	3.48	0.48

In typewriting, 328 schools, or 31.78 per cent, make no offerings; 407, or 39.43 per cent, provide one unit's work; 272, or 26.35 per cent, provide two units' work; 23, or 2.22 per cent, provide three units' work; and only 2 schools, or 0.02 per cent, provide four units' work. Thus the mode of the association is one or two units.

TABLE 101.—*Offerings in typewriting.*

State.	Number of schools offering—				
	None.	One unit.	Two units.	Three units.	Four units.
Arizona	0	3	2	1	0
Colorado	8	12	16	0	0
Illinois	32	47	51	4	1
Indiana	28	36	15	0	0
Iowa	33	12	23	7	1
Kansas	16	25	26	0	0
Michigan	28	57	25	2	0
Minnesota	14	32	18	3	0
Missouri	20	21	9	2	0
Montana	3	7	14	1	0
Nebraska	25	19	13	0	0
New Mexico	1	3	0	0	0
North Dakota	12	15	3	0	0
Ohio	73	65	25	2	0
South Dakota	13	9	2	0	0
Wisconsin	22	41	28	1	0
Wyoming	0	3	2	0	0
Total	328	407	272	23	2
Percentage	31.78	39.43	26.35	2.22	0.02

Stenography is offered in all except 297, or 28.77 per cent of the schools; 278, or 26.93 per cent, offer one unit's work; 430, or 41.66 per cent, offer two units' work; 25, or 2.42 per cent, offer three units' work; and 2 schools, or 0.02 per cent, offer four units' work. Every large school except 23 (15 of which are in Ohio) makes some pretense at teaching the subject. Among the small schools, 132 omit it, and among the medium schools, 142 do not include it.

TABLE 102.—*Offerings in stenography.*

State.	Number of schools offering—				
	None.	One unit.	Two units.	Three units.	Four units.
Arizona	0	3	3	0	0
Colorado	9	8	19	0	0
Illinois	28	25	73	8	1
Indiana	24	25	29	1	0
Iowa	31	13	28	4	0
Kansas	20	15	31	1	0
Michigan	20	26	62	4	0
Minnesota	12	25	27	3	0
Missouri	21	15	16	0	0
Montana	2	6	17	0	0
Nebraska	23	18	16	0	0
New Mexico	1	2	1	0	0
North Dakota	13	11	6	0	0
Ohio	63	50	50	2	0
South Dakota	12	8	4	0	0
Wisconsin	18	25	46	2	1
Wyoming	0	3	2	0	0
Total	297	278	430	25	2
Percentage	28.77	26.93	41.66	2.42	0.02

In commercial law the figures reveal the following facts: 420 schools, or 40.69 per cent, do not teach the subject; 559 schools, or 54.16 per cent, offer it for one-half year; and 53 schools, or 5.13 per cent, give it a full year's work. The variation in practices in the several States is not marked. The subject is taught in all the large schools except 44.

TABLE 103.—*Offerings in commercial law.*

State	Schools offering—			State.	Schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	2	3	1	Nebraska	32	25	0
Colorado	21	15	0	New Mexico	1	3	0
Illinois	35	94	6	North Dakota	15	14	1
Indiana	43	35	1	Ohio	65	93	7
Iowa	27	34	15	South Dakota	11	13	0
Kansas	29	36	2	Wisconsin	42	46	4
Michigan	33	71	8	Wyoming	1	2	2
Minnesota	23	41	3				
Missouri	33	19	0	Total	420	559	53
Montana	7	15	3	Percentage	40.69	54.16	5.13

In commercial arithmetic no provision for the work is made in 236 schools, or 22.86 per cent; 459, or 44.47 per cent, offer an amount equal to one-half unit; and 327, or 32.65 per cent, include a full year's course. Here, again, the variations among the several States are not conspicuouc. There are but 28 of the large schools which do not offer some opportunity to carry forward this branch of study.

TABLE 104.—*Offerings in commercial arithmetic.*

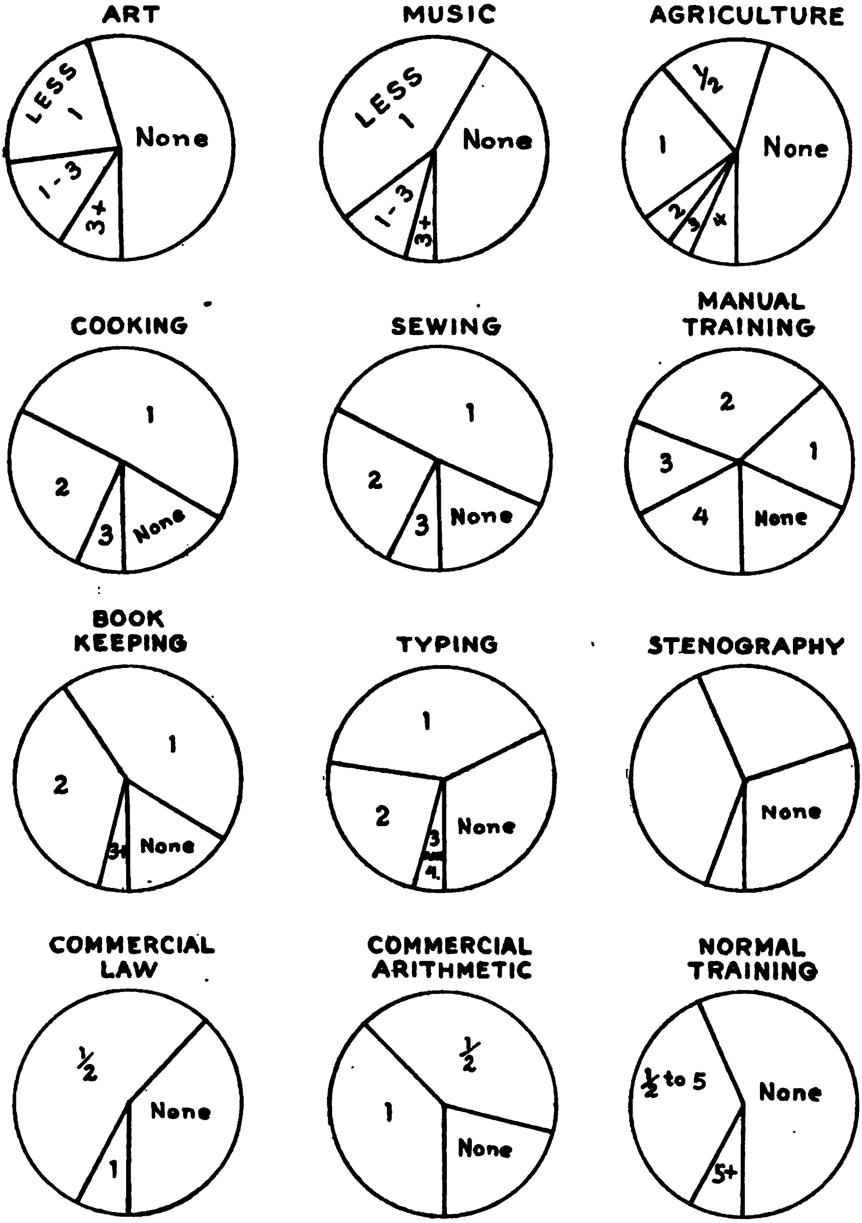
State.	Schools offering—			State.	Schools offering—		
	None.	One-half unit.	One unit.		None.	One-half unit.	One unit.
Arizona	0	3	3	Nebraska	24	22	11
Colorado	6	17	13	New Mexico	0	4	0
Illinois	17	45	73	North Dakota	13	16	1
Indiana	6	62	11	Ohio	43	62	60
Iowa	24	33	19	South Dakota	11	10	3
Kansas	22	21	24	Wisconsin	12	47	33
Michigan	14	57	41	Wyoming	1	2	2
Missouri	29	17	6				
Minnesota	14	34	19	Total	236	459	337
Montana	0	7	18	Percentage	22.86	44.47	32.65

Table 105 shows the offerings in normal training. Some of this training as a part of the regular courses is offered by 410 high schools, or 39.72 per cent of all. Something less than five units is offered by 359, or 34.78 per cent; 28, or 2.71 per cent, offer between 5 and 10 units; 6, or 0.58 per cent, offer something between 10 and 15 units; and 17 1.64 per cent, offer more than 15 units. The States in which this type of work is somewhat conspicuous are Iowa, Kansas, Minnesota, Missouri, North Dakota, and Nebraska. The States which give little recognition to the subject are Arizona, Colorado, Indiana, Michigan, Montana, New Mexico, Ohio, and Wisconsin. With over 400 schools teaching the subject, it is a fair query to raise whether the association ought not to include the subject on the lists of units recommended for acceptance by colleges.

TABLE 105.—*Offerings in normal training.*

State.	Number of schools offering—				
	None.	One-half to five units.	Six to ten units.	Eleven to fifteen units.	Over fifteen units.
Arizona	5	0	0	0	1
Colorado	27	9	0	0	0
Illinois	94	39	0	0	2
Indiana	77	2	0	0	0
Iowa	23	43	10	0	0
Kansas	4	62	1	0	0
Michigan	99	13	0	0	0
Minnesota	20	45	1	0	1
Missouri	24	28	0	0	0
Montana	21	4	0	0	0
North Dakota	8	22	0	0	0
Nebraska	5	52	0	0	0
New Mexico	4	0	0	0	0
Ohio	119	11	16	6	13
South Dakota	16	8	0	0	0
Wisconsin	73	19	0	0	0
Wyoming	3	2	0	0	0
Total	622	359	28	6	17
Percentage	60.27	34.78	2.71	0.58	1.64

Table 106 shows the offerings in physical education. No pretense whatever of providing for this training is made by 760 schools, or 73.64 per cent; 189, or 18.31 per cent, offer the work to the extent of one unit; 59, or 5.71 per cent, give it for a total of two units; 8, or 0.77 per cent, offer three units' work, and 16, or 1.55 per cent, offer four units' work; that is, nearly three-fourths of all the accredited schools ignore the matter of systematic physical education, and most of the others give it scant attention In this respect all the States are nearly equally guilty, as no one of them shows by the reports that it has given the subject much serious consideration.



ART

MUSIC

AGRICULTURE

COOKING

SEWING

MANUAL TRAINING

BOOK KEEPING

TYPING

STENOGRAPHY

COMMERCIAL LAW

COMMERCIAL ARITHMETIC

NORMAL TRAINING

CHART XXVI.—Shows graphically the facts revealed in Tables 94–105, namely, the extent of the offerings of vocational subjects in the programs of study, in units.

TABLE 106.—*Offerings in physical education.*

State.	Number of schools offering—				
	None.	One unit.	Two units.	Three units.	Four units.
Arizona	4	2	0	0	0
Colorado	27	8	1	0	0
Illinois	80	42	7	1	5
Indiana	55	21	3	0	0
Iowa	55	14	5	1	1
Kansas	51	13	2	1	0
Michigan	86	16	7	1	2
Minnesota	49	15	3	0	0
Missouri	38	6	7	1	0
Montana	16	5	3	0	1
North Dakota	24	6	0	0	0
Nebraska	41	8	7	0	1
New Mexico	3	1	0	0	0
Ohio	130	12	9	1	4
South Dakota	18	4	2	0	0
Wisconsin	71	14	3	2	2
Wyoming	3	2	0	0	0
Total	760	189	59	8	16
Percentage	73.64	18.31	5.71	0.77	1.55

Table 107, which follows, shows that, except for Arizona, Indiana, New Mexico, and Wyoming, the number of academic units offered in the typical accredited school is about 22. The four States mentioned offer a considerably larger number of units. Likewise, except for Arizona and Minnesota, which have a relatively large number of vocational units, and except for New Mexico, Ohio, and South Dakota, which have a relatively small number of vocational units, the typical high school offers from 10 to 15 vocational units. Except, again, Arizona, Indiana, Minnesota, and Wyoming, all of which offer a relatively large number of units (academic and vocational), the typical high school provides an offering of about 30 to 37 units of work.

TABLE 107.—*Average number of units offered in the schools of the several States.*

State.	Academic units.	Vocational units.	Academic and vocational units combined.	State.	Academic units.	Vocational units.	Academic and vocational units combined.
Arizona	32	17	49	Montana	23	14	37
Colorado	24	10	34	Nebraska	19	10	29
Illinois	24	15	39	New Mexico	29	8	37
Indiana	29	12	41	North Dakota	20	10	30
Iowa	22	12	34	Ohio	23	9	32
Kansas	20	13	33	South Dakota	21	8	29
Michigan	23	12	35	Wisconsin	18	15	33
Minnesota	22	18	40	Wyoming	35	11	46
Missouri	24	13	37				

Range of academic units, 18 to 35.
Range of vocational units, 8 to 18.
Range of both academic and vocational units, 29 to 49.

TABLE 108.—*Vocational work offered in the public schools.*

State.	Number of accredited schools.	Number of schools offering— Art.	Music.	Agriculture.	Cooking.	Sewing.	Bookkeeping.
Arizona	6	6	6	2	6	6	6
Colorado	36	16	25	12	31	28	30
Illinois	135	82	89	51	117	116	117
Indiana	79	71	74	38	73	71	64
Iowa	76	17	40	70	73	65	66
Kansas	67	13	46	64	65	64	53
Michigan	112	55	79	48	78	82	102
Minnesota	67	31	47	47	66	62	59
Missouri	52	22	27	33	39	36	34
Montana	25	12	16	10	24	21	24
Nebraska	57	4	32	53	49	36	44
New Mexico	4	1	3	2	4	3	4
North Dakota	30	17	27	14	30	30	23
Ohio	165	66	87	111	107	94	117
South Dakota	24	8	14	16	17	17	15
Wisconsin	92	19	32	34	77	78	80
Wyoming	5	3	4	0	4	4	5
Total	1,032	443	646	605	860	813	843

State.	Number of schools offering— Stenography.	Typewriting.	Commercial arithmetic.	Commercial law.	Manual training.	Normal training.	Physical education.
Arizona	6	6	6	4	5	1	2
Colorado	27	28	30	15	28	9	9
Illinois	107	103	118	100	117	41	55
Indiana	55	51	73	37	67	2	24
Iowa	45	43	52	49	68	53	21
Kansas	47	51	45	38	65	63	16
Michigan	92	84	98	79	80	13	26
Minnesota	55	53	53	44	65	47	18
Missouri	31	32	23	19	39	28	14
Montana	23	22	25	18	20	4	9
Nebraska	34	32	33	25	43	52	16
New Mexico	3	3	4	3	4	0	1
North Dakota	17	18	17	15	29	22	6
Ohio	102	92	122	100	91	46	26
South Dakota	12	11	13	13	19	8	6
Wisconsin	74	70	80	50	66	19	21
Wyoming	5	5	4	4	3	2	2
Total	735	704	796	613	809	409	272

TABLE 109.—*Extent of offerings, in percentages, of all the vocational or nonacademic subjects.*

Subjects.	Number of schools offering— None.	One-half unit.	One unit.	Two units.	Three units.	Four units.	Less than one.	One to three.	More than three.
Art	58.13	....	....	....	....	....	21.12	13.95	6.78
Music	37.20	....	....	....	....	....	41.18	18.12	3.48
Agriculture	41.46	15.79	23.83	7.54	4.06	7.26	....	....	....
Cooking	16.66	....	52.13	25.58	5.62	....	....	....	....
Sewing	21.22	....	48.54	24.41	[1] 5.81	....	....	....	....
Manual training	21.60	....	20.25	34.69	8.43	15.01	....	....	....
Bookkeeping	18.31	....	41.81	35.85	3.48	.48	....	....	....
Typewriting	31.78	....	39.43	26.35	2.22	.02	....	....	....
Stenography	28.77	....	26.93	41.66	2.42	.02	....	....	....
Commercial law	40.69	54.16	5.13	....	....	....	....	....	....
Commercial arithmetic	22.86	44.47	32.65	....	....	....	....	....	....
Normal training	60.27	[2] 34.78	....	....	....	....	....	....	....
Physical education	73.64	....	18.31	5.71	.77	1.55	....	....	....

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[1] Over 2 units.

[2] 34.78 per cent with ½ to 5 units; 2.71 per cent from 5 to 10; and 2.22 per cent over 10 units.

DIVISION E—MISCELLANEOUS ITEMS.

The tabulations presented in this division of the study were made from the data reported on the individual teacher cards. (See sample card on pp. 12–13.) This portion of the analyses was the most time consuming and, likewise, the most unsatisfactory of any of the work undertaken. The total number of teachers giving instruction in the North Central Association schools in 1916–17 was 20,090. Many of these, however, failed to fill out the individual report cards at all; others obviously did so in a hurried and, therefore, in a careless and inaccurate manner; and still others very evidently misunderstood the import of the questions asked and either gave only partial answers, or else vague or misleading replies.

Nevertheless, the cards of approximately 17,000 teachers were sufficiently acceptable to constitute the basis for computations; not every item on each card was, however, filled in by all these individuals. In consequence the totals in the several tables are not always the same. Nevertheless, the results presented are accurate, in so far as the individual report cards themselves can be accepted as accurate.

As in the other portions of this part of the study, the analyses were confined to the reports of teachers in the public schools.

ADVANCED DEGREES HELD BY TEACHERS.

Table 110 shows the academic training of the public-school teachers. The cards filled out by 16,934 persons were used for the analyses.[1]

In the 1,032 public secondary schools accredited by the association in 1917 are to be found 71 individuals holding the degree of doctor of philosophy and 1,668 persons possessing the degree of master of arts or master of science. In percentages, the figures are with Ph. D. degree, 0.41 per cent; with M. A. or M. S. degree, 9.85 per cent. That is, 10.26 per cent of the teachers hold collegiate degrees of higher grade than that of bachelor.

As would doubtless be expected, Illinois with its 46 large schools leads all the States in the number of teachers with advanced college degrees, with Ohio, Indiana, Missouri, and Michigan following in order. On a percentage basis, however, the ranking is decidedly different. Here Wyoming with only 11 teachers reporting shows 18.1 per cent with higher degrees, and New Mexico, with 36 teachers reporting, shows 16.4 per cent with higher degrees. Then follow Missouri, Colorado, Ohio, and Illinois in order. Considered on the basis of sex, 57 men and 14 women hold the degree of Ph. D., and 874 men and 794 women the degree of M. A. and M. S.

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[1] In this division of the study no attempt is made to segregate new teachers from those not new, or academic teachers from the vocational teachers. The figures ought not, therefore, to be compared with those presented in other parts of the study in which segregation is followed.

The number of teachers with the bachelor's degree is 11,687, or 69.01 per cent of the total number reporting. Or, stated conversely, 30.80 per cent of those reporting do not hold a bachelor's degree. This percentage is slightly different from the figures given in Division A of this study, and is due to the difference in the number of teachers reporting. There is no great inconsistency in the two sets of findings.

The conditions in the several States are likewise not notably at variance. The percentages of teachers with collegiate degrees range from 60.6 per cent in Wisconsin to 79.2 per cent in South Dakota.

The figures in all the tables here presented include the data respecting old teachers as well as new, and vocational teachers as well as teachers of strictly academic work. Moreover, the fact should be kept in mind that the association never has established the ideal of college graduation as a standard requirement either for teachers of vocational subjects or for academic teachers who were already employed in the given school system when the school was first accredited.

TABLE 110.—*Academic training of teachers.*

State.	Number of teachers reporting.	Number with Ph. D. degree.	Number with M.A. or M. S. degree.	Per cent with higher degree.	Number with bachelors' degree.	Per cent with college degree.
Arizona[1]						
Colorado	599	1	79	13.3	436	72.8
Illinois	3,033	24	337	11.9	1.950	64.9
Indiana	1,527	6	161	10.9	1.002	65.6
Iowa	1,244	1	77	6.2	934	75.1
Kansas	1,022	1	90	8.9	744	73.7
Michigan	1,818	4	129	7.3	1.167	64.2
Minnesota	1,088	2	97	9.0	758	69.6
Missouri	1.138	12	145	13.8	756	66.4
Montana	343	0	44	12.8	245	71.4
Nebraska	549	2	61	11.4	485	88.3
New Mexico	36	2	4	16.4	25	66.4
North Dakota	307	1	21	7.1	228	74.2
Ohio	2,544	15	302	12.5	1,882	73.9
South Dakota	275	0	25	9.1	218	79.2
Wisconsin	1,400	0	94	6.7	849	60.6
Wyoming	11	0	2	18.1	8	72.7
Total	16.934	71	1.668		11,687	
Percentage		0.41	9.8	10.26	69.01	69.01

[1] No reports.

EXTENT OF PROFESSIONAL TRAINING OF TEACHERS.

Table 111 shows the professional training of teachers. Here again the number reporting is 16,934, and includes both academic and vocational teachers. Of this number, 4,323, or 25.52 per cent, received their professional training in both normal schools and in departments or schools of education in colleges and universities; 4,529, or 26.74 per cent, have no credit hours whatever in education and may fairly be assumed to be entirely without systematic institutional training in the science and art of teaching; 1,905, or 11.24 per cent, have had some professional training but less than the amount standardized as 11 semester hours; while 10,500, or 62 per cent, have 11 or more hours' credit in education. That is, 73.24 per cent of all the teachers reporting, academic and vocational, have had professional training of some kind and to some extent.

TABLE 111.—*Professional training of teachers.*

State.	Number of teachers reporting.	Number trained in both normal school and college.	Number without credit in education.	Number with some credit in education but less than 11 hours.	Number with 11 or more hours credit in education.
Arizona [1]					
Colorado	599	144	121	98	380
Illinois	3,033	800	876	571	1,586
Indiana	1,527	572	393	167	967
Iowa	1,244	282	338	103	803
Kansas	1,022	244	166	70	786
Michigan	1,818	505	534	162	1,122
Minnesota	1,088	179	299	131	658
Missouri	1,138	316	382	122	634
Montana	343	98	72	33	238
Nebraska	549	149	78	29	442
New Mexico	36	14	6	0	30
North Dakota	307	85	37	25	245
Ohio	2,544	475	916	240	1,388
South Dakota	275	67	40	21	214
Wisconsin	1,400	391	270	132	998
Wyoming	11	2	1	1	9
Total	16,934	4,323	4,529	1,905	10,500
Percentage		25.52	26.74	11.24	62.00

[1] No reports.

CORRESPONDENCE OF PREPARATION AND SUBJECTS TAUGHT.

Table 112 shows the extent to which there is correspondence between the subjects which teachers prepared themselves especially to teach and the subjects which they are actually teaching. Of the 16,934 persons whose cards were analyzed, 13,499, or 79.71 per cent, were teaching their academic specialties; 1,911, or 11.28 per cent, were not teaching solely (if at all) their academic specialties; and the others, 1,524 persons, did not reply to the question. It is a commonplace statement to say that teachers can not teach what they themselves do not know, and it is reasonable to assume that they do not know, in the manner which the ideal demands that they should know, unless they have made the subject they teach a part of their specialized work in college or normal school. When, therefore, only approximately four-fifths of the teachers are teaching the subjects which they prepared themselves to teach, or, put otherwise, when approximately one-tenth or more are teaching subjects which they positively did not prepare themselves to teach, a large source of weakness, ineffectiveness, and possibly personal hardship is introduced into the school system. It is a fair question to raise whether the association ought not to make correspondence of the teachers' training and of the work the teacher is called upon to do a positive standard for future enforcement.

TABLE 112.—*Correspondence of subjects of academic specializations and of classroom teaching.*

State.	Number of teachers reporting.	Number teaching academic specialty.	Number not teaching academic specialty (entirely).
Arizona[1]	....	....	....
Colorado	599	469	95
Illinois	3,033	2,460	349
Indiana	1,527	1,253	162
Iowa	1,244	974	199
Kansas	1,022	894	93
Michigan	1,818	1,385	186
Missouri	1,138	902	108
Minnesota	1,068	946	82
Montana	343	290	27
Nebraska	549	414	61
New Mexico	36	31	3
North Dakota	307	261	42
Ohio	2,544	1,862	333
Oklahoma[1]	....	....	....
South Dakota	275	234	27
Wisconsin	1,400	1,114	144
Wyoming	11	10	0
Total	16,934	13,499	1,911
Percentage	....	79.71	11.28

[1] No report.

DISTRIBUTION OF TEACHING INTERESTS.

Table 113 shows the number of departmentally different subjects taught by teachers each day. Only 16,481 persons made reports on this specific item. Hence the percentages given are based on that number. Of all the teachers reporting, 78.89 per cent were teaching only a single departmental subject or branch; 17.36 per cent were teaching two distinct subjects; 3.26 per cent were teaching three distinct subjects; 0.43 per cent were teaching four distinct subjects; and but the merest fraction of 1 per cent were teaching more than four subjects. These figures surely show that teachers in the North Central Association schools are not required or allowed to disperse their efforts over many diverse fields. Indeed, it may be questioned whether there is sufficient dispersion or variety of work. Concentration no doubt tends to mastery of content and method, but it may likewise tend toward an abridgment of the power of making effective intercorrelations.

TABLE 113.—*Number of departmentally different subjects taught by teachers daily.*

State.	One department subject.	Two department subjects.	Three department subjects.	Four department subjects.	Five or more department subjects.
Arizona[1]					
Colorado	448	134	17	0	0
Illinois	2,213	640	124	13	0
Indiana	1,211	246	26	2	1
Iowa	839	332	53	2	0
Kansas	1,001	4	0	0	0
Michigan	1,495	281	40	2	0
Missouri	1,064	2	0	0	0
Minnesota	818	176	34	6	0
Montana	228	94	18	1	0
Nebraska	273	180	73	20	3
New Mexico	19	15	2	0	0
North Dakota	145	98	18	2	2
Ohio	1,721	592	115	21	0
South Dakota	158	65	18	3	0
Wisconsin	1,362	2	0	0	0
Wyoming	8	1	0	0	0
Total	13,003	2,862	538	72	6
Percentage[2]	78.89	17.36	3.26	0.43	0.003

[1] No report.

[2] The per cent was figured on the *number* reporting, 16,481.

PART III.—NONPUBLIC SCHOOLS.[1]

In the study of the nonpublic schools the threefold classification used in the public schools is not maintained, but the schools are divided into four types according to the general character of the schools. These four types are: Private high schools, military high schools, preparatory high schools, and parochial high schools. High schools attached to higher institutions of learning are classed as preparatory schools.

Table 114 shows that there are 87 nonpublic schools accredited by the association. Of these, 27 are private schools, 6 are military, 47 are preparatory, and 5 are parochial. That is, the number of accredited nonpublic schools is only one-twelfth the number of the accredited public schools. Chart XXXVII shows the distribution of the nonpublic schools by types.

Nearly one-third of the accredited nonpublic schools are located in Illinois, and, with one exception, these are either preparatory or private; Missouri and Ohio have, respectively, 11 and 10 accredited nonpublic schools; Michigan, Nebraska, and Wisconsin have four schools each; while four States, Arizona, New Mexico, Montana, and Wyoming, have no such schools accredited. Chart XXXVIII shows the distribution of the nonpublic schools by States.

TABLE 114.—*Number and types of nonpublic schools.*

States.	Private.	Military.	Preparatory.	Parochial.	Total.
Arizona	0	0	0	0	0
Colorado	1	0	0	0	1
Illinois	11	1	15	0	27
Indiana	1	2	1	0	4
Iowa	0	0	2	0	2
Kansas	0	0	5	1	6
Michigan	3	0	3	1	7
Minnesota	2	0	0	0	2
Missouri	3	1	7	0	11
Montana	0	0	0	0	0
North Dakota	0	0	2	0	2
Nebraska	1	0	5	1	7
New Mexico	0	0	0	0	0
Ohio	5	0	5	0	10
South Dakota	0	0	0	1	1
Wisconsin	2	2	2	1	7
Wyoming	0	0	0	0	0
Total	29	6	47	5	87

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[1] The tables and charts of Part III are chiefly the work of William J. Baumgartner.

PUPILS.

Table 115 shows that the nonpublic schools enroll 12,355 pupils, of whom 60.25 per cent, or 7,472, are boys and 39.75 per cent, or 4,889, are girls. In the preparatory schools the boys exceed the girls, and in parochial and private schools the girls exceed the boys. The average military school enrolls 221 pupils; the average preparatory school enrolls 96 girls and 46 boys, or 143 pupils; the average private school enrolls 53 boys and 85 girls, or 138 pupils; and the average parochial school enrolls 14 boys and 48 girls, or 62 pupils. If the standards for making the threefold division of the public schools were applied to the nonpublic schools, the private, preparatory, and parochial schools would fall into the class of the small high schools, and the military schools into the class of the medium-sized schools. The total enrollment of the nonpublic schools is less than 1 per cent of the enrollment of the freshman or first-year class in the public schools. The fact that the military schools enroll only boys would increase the percentage of enrollment for boys, but exclusive of these schools the enrollment for boys still exceeds the enrollment for girls by 13.2 per cent, the percentages being, for boys 56.6 per cent, for girls 43.4 per cent.

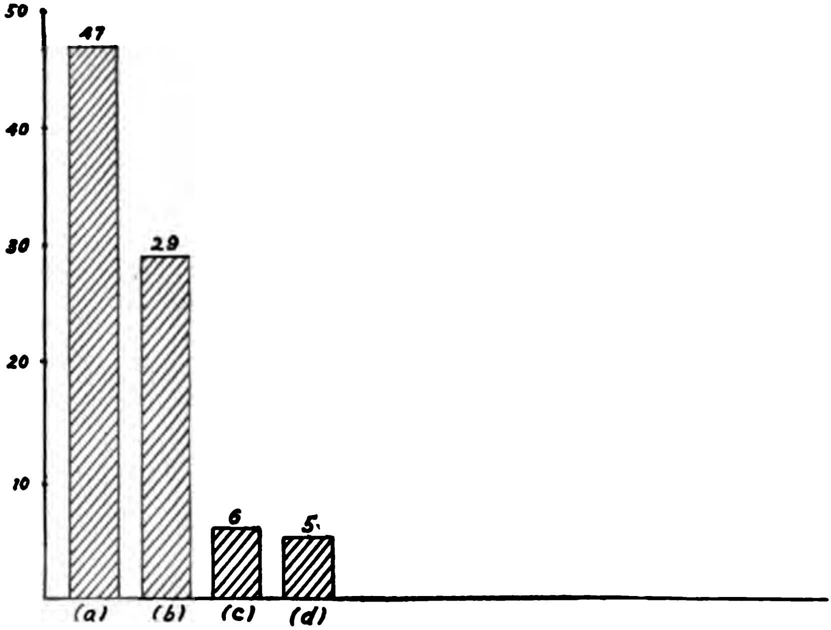

CHART XXXVII.—Number and types of nonpublic schools: (a) preparatory; (b) private; (c) military; (d) parochial.

TABLE 115.—*Total enrollment, by States, for each type of nonpublic school.*

States.	Private.	Military.	Preparatory.	Parochial.	Total.
Colorado	638	0	0	0	638
Illinois	1,070	219	2,440	0	3,729
Indiana	12	632	228	0	872
Iowa	0	0	240	0	240
Kansas	0	0	582	35	617
Michigan	1,017	0	743	50	1,810
Minnesota	230	0	0	0	230
Missouri	280	153	358	0	791
North Dakota	0	0	203	0	203
Nebraska	59	0	627	73	759
Ohio	453	0	940	0	1,393
South Dakota	0	0	0	68	68
Wisconsin	253	319	347	86	1,006
Total	4,012	1,323	6,708	312	12,355
Average per school	138	221	143	62	142

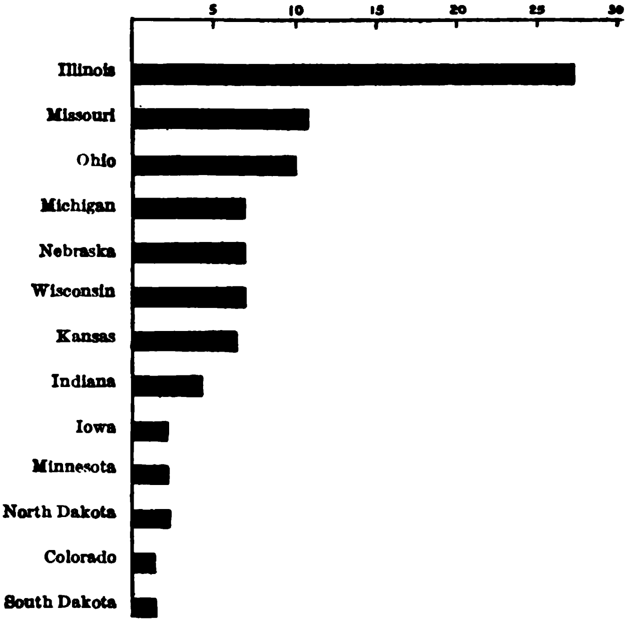

CHART XXXVIII.—Distribution of nonpublic schools, by States.

TABLE 116.—*Enrollment in the different types of nonpublic schools, by classes.*

Types of school.	Fourth year.	Third year.	Second year.	First year.
Private	710	874	838	846
Military	286	346	265	315
Preparatory[1]	461	1,554	1,630	1,904
Parochial	79	87	80	66
Total	2,536	2,861	2,813	[1] 3,131
Average	29	33	32	36
Percentage	22.4	25.2	24.7	27.7

[1] Special and irregular students are not included.

Table 116 shows the distribution of pupils among the four years or classes of nonpublic high schools. Expressed in percentages, they are: 22.4 per cent of the enrollment of the nonpublic school pupils are in the fourth year, 25.2 per cent in the third year, 24.7 per cent in the second year, and 27.7 per cent in the first year. Compared with the public-school enrollment, the distribution is less marked. The difference in the percentages of enrollment of the first and fourth years of the nonpublic schools is but 5.3, while for the public school there is a loss of 22.9 per cent from the first to the fourth year.

In the year 1916 the nonpublic schools graduated 2,535 pupils. Of these, 59.9 per cent were boys and 40.1 per cent were girls. These percentages are almost exactly the reverse of the percentages for the public schools, where the figures are: Boys graduating, 41.9 per cent; girls graduating, 58.1 per cent. Moreover, of those thus graduating, 1,460, or 57.6 per cent, entered institutions of higher learning the succeeding autumn, whereas among the graduates of the public schools of the same year only 38.1 per cent continued their systematic school work immediately. In the nonpublic schools the number of pupils graduating in 1916 was 20.4 per cent of the entire enrollment, while in the public schools the number of pupils graduating this same year was but 13.9 per cent of the total enrollment.

TABLE 117.—*Number of graduates in 1916 and number of these graduates attending institutions of higher learning in the fall of 1916.*

Types of school.	Boys graduating.	Girls graduating.	Total graduating.	Number entering college.
Private	368	471	840	433
Military	198	0	198	94
Preparatory	944	489	1,433	900
Parochial	12	53	65	33
Total	1,522	1,013	2,535	1,460
Average	17	12	29	17
Percentage	59.9	40.1	....	57.6

TEACHERS.

Table 118 reveals the fact that the total number of teachers in the 87 nonpublic schools is 1,175, or an average of 13.5 teachers per school. The typical public school employs 17.6 teachers. More than one-half of the teachers of the nonpublic schools are employed in the preparatory schools; one-third are in the private schools, while the military and parochial schools employ but 12.2 per cent of the total number. As to sex, the men exceed the women, but if the teachers of the military schools are excluded, then the percentages are 50 per cent for men and 50 per cent for women. Whether the teachers of the military schools are excluded or not, the fact remains that the nonpublic schools employ a larger percentage of men than do the public schools, the figures being: Public schools, men, 38.25 per cent; nonpublic schools (including military schools), men, 54.3 per cent; excluding military schools, 50 per cent.

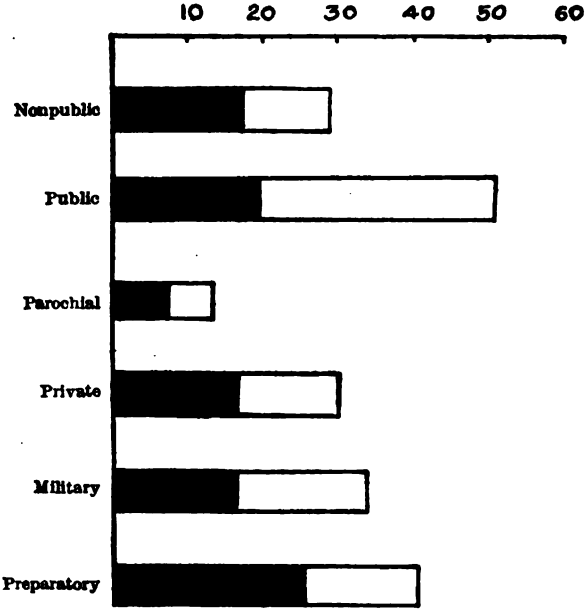

CHART XXXIX.—Average number of graduates per school in 1916 and average number per school immediately entering college. Entire areas—the number graduating; dark portions indicate the numbers going to college.

TABLE 118.—*Number of teachers employed in the various types of nonpublic schools, with averages for each type of school.*

State.	Men.	Women.	Total.	Average per school.	Teachers.			
					In private schools.	In military schools.	In preparatory schools.	In parochial schools.
Colorado	11	14	25	25	25	0	0	0
Illinois	209	180	389	14	156	11	222	0
Indiana	74	12	86	19	12	53	21	0
Iowa	4	15	19	9	0	0	19	0
Kansas	36	30	66	11	0	0	61	5
Michigan	52	33	85	12	34	0	46	5
Minnesota	4	23	27	13	27	0	0	0
Missouri	39	77	116	10	31	15	70	0
Nebraska	44	35	79	11	13	0	61	5
North Dakota	20	10	30	15	0	0	30	0
Ohio	91	47	138	14	64	0	74	0
South Dakota	2	10	12	12	0	0	0	12
Wisconsin	52	51	103	15	30	21	36	16
Total	638	537	1,175	13.5	392	100	640	43
Average per school					13.4	16.6	13.6	8.6
Percentage	54.3	45.7			33.3	8.5	54.5	3.7

ACADEMIC AND VOCATIONAL TEACHERS.

Table 119 shows that the typical private school employs 9.3 academic teachers and 4.2 vocational teachers; the typical military school employs 13.1 academic teachers and 3.5 vocational teachers; the typical preparatory school enploys 10.5 academic teachers and 3.2 vocational teachers; and the typical parochial school employs 5.8 academic teachers and 2.8 vocational teachers. The typical nonpublic school, therefore, employs 10 academic teachers and 3.5 vocational teachers. The typical public school employs 12 academic teachers and 5.6 vocational teachers.

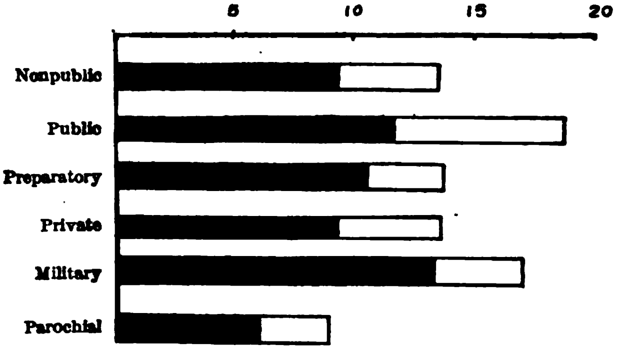

CHART XL.—Average number of teachers per school. Dark portions indicate academic teachers; outlined portions indicate vocational teachers.

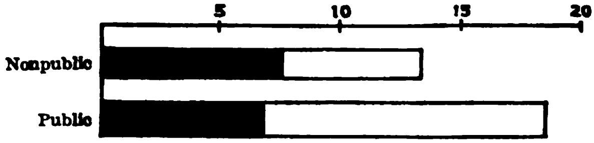

CHART XLI.—Average number of teachers, by sexes, in the nonpublic and public schools. Dark portions indicate men; outlined portions indicate women.

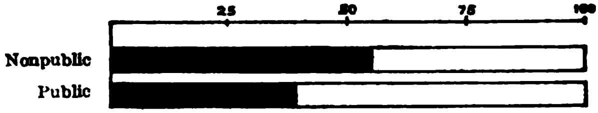

CHART XLII.—Percentages of men and women teachers in the nonpublic and public schools. Dark portions indicate men; outlined portions indicate women.

By comparing these figures with the enrollment figures of the several types of schools, the further fact is brought out that in the public schools there is, on the average, one teacher to every 20.8 pupils, whereas in the nonpublic schools there is one teacher for every group of 10.5 pupils. Within the group of nonpublic schools themselves the military and parochial schools show interesting departures from the nonpublic school's norm, since the typical military school

employs one teacher for every 13 pupils and the typical pa
school one teacher for every 7 pupils.

TABLE 119.—*Number of academic and vocational teachers in various types of no schools.*

State.	Private.		Military.		Preparatory.		Parochial.		Total.	
	Academic.	Vocational.	Academic.	Vocational.	Academic.	Vocational.	Academic.	Vocational.	Academic.	Vocational
Colorado	18	7	0	0	0	0	0	0	18	7
Illinois	105	51	10	1	164	58	0	0	279	110
Indiana	7	5	38	15	19	2	0	0	64	22
Iowa	0	0	0	0	15	4	0	0	15	4
Kansas	0	0	0	0	49	12	5	0	54	12
Michigan	19	15	0	0	40	6	3	2	62	23
Minnesota	21	6	0	0	0	0	0	0	21	6
Missouri	25	6	12	3	50	20	0	0	89	27
North Dakota	0	0	0	0	18	12	0	0	18	12
Nebraska	8	5	0	0	55	6	4	1	67	12
Ohio	47	17	0	0	57	17	0	0	104	34
South Dakota	0	0	0	0	0	0	7	5	7	5
Wisconsin	20	10	19	2	25	11	10	6	74	29
Total	270	122	79	21	492	148	29	14	872	303
Average per school	9.3	4.2	13.1	3.5	10.5	3.2	5.8	2.8	10.0	3.5

Percentages: Vocational teachers, 25.8 per cent; academic teachers, 74.2 pe

Of the total number of teachers in the nonpublic schools, 87
74.2 per cent, are academic teachers, and 303, or 25.8 per cen

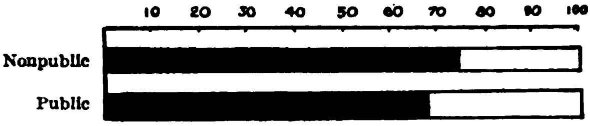

CHART XLIII.—Percentages of academic and vocational teachers in the nonpublic and public
Dark portions indicate academic teachers; outlined portions indicate vocational teachers.

vocational, while for the public schools the percentages are 67.
cent for academic teachers and 32.64 per cent for vocational.
highest percentage of vocational teachers is found in the par
schools, and the largest percentage of academic teachers are i
military schools. The percentage of academic teachers for th
vate, military, preparatory, and parochial schools are, respect
68.8, 79.1, 76.8, and 65.1 per cent. In every case except the par
schools, they exceed the percentage of academic teachers fc
public schools.

NEW TEACHERS.

Of the total number of teachers of the nonpublic schools, 2
24.7 per cent, were new to the system in 1916. Of these, 203,
per cent, were academic teachers, and 87, or 30 per cent, were
tional teachers. These percentages are slightly below those f

public schools. Speaking in terms of the average number of new teachers per school, the nonpublic schools have 3.3 new teachers per school; the public, 4.5 new teachers per school. It is evident from a comparison of the tables of new teachers for the nonpublic and public schools that the shifting of teachers each year is practically the same, but that the shift is greater among the teachers of academic subjects in the nonpublic schools.

The number of *new* academic teachers without college degrees is very small, being but 5.3 per cent of the total number of new academic teachers and only 1.2 per cent of the entire corps of academic teachers. These percentages differ but slightly from those for the public schools. The per cent of academic teachers without any previous teaching is greater for the public schools, than for the nonpublic schools, a fact which would indicate that the public schools are recruiting more new teachers than the nonpublic schools. On the other hand, the nonpublic schools are employing more new teachers without 11 hours of professional study than are the public schools, 21.6 per cent of the new academic teachers not having had 11 hours of professional study, while for the public schools the percentage is but 12.3 per cent.

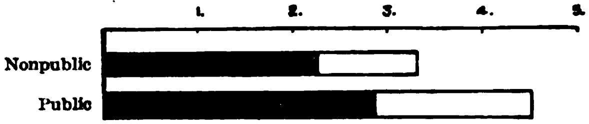

Chart XLIV.—Average number of new teachers per school. Dark portions indicate men; outlined portions indicate women.

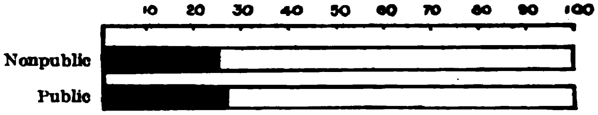

Chart XLV.—Percentage of annual shiftings of teachers. Dark portions indicate percentage of new teachers; outlined portions indicate percentage of not new teachers.

More than half (52.4 per cent) of the vocational teachers of the nonpublic schools are college graduates, while only 40.1 per cent of the vocational teachers of the public schools are college graduates. The subjects they teach, named in order of instances, are industrial subjects, art, science, physical education, and commercial subjects. For the public schools the industrial and commercial subjects lead.

TABLE 120.—*Training and experience of academic teachers.*

State.	Without college degree.		Without 11 hours of professional study.		Witl previ teacl exp ienc
	New.	Old.	New.	Old.	
Colorado	0	0	1	5	
Illinois	2	14	11	82	
Indiana	0	4	0	11	
Iowa	1	0	1	0	
Kansas	0	3	0	11	
Michigan	0	7	7	5	
Missouri	1	7	8	32	
Nebraska	2	0	1	21	
North Dakota	0	0	0	11	
Ohio	0	3	2	5	
South Dakota	0	2	2	6	
Wisconsin	5	3	11	22	
Total	11	43	44	211	
Percentage	5.3		21.6		

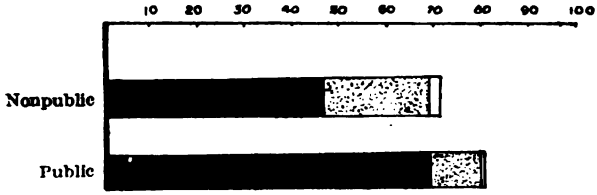

CHART XLVI.—Academic training of teachers. Dark portions indicate percentage holding bachel degrees; dotted portion, master's degrees; outlined portions, doctor's degrees.

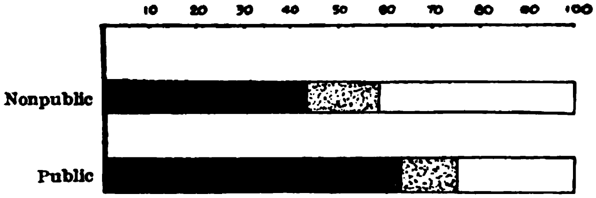

CHART XLVII.—Professional training of teachers. Dark portions indicate percentage having 11 hour more; dotted portions, less than 11 hours; outlined portions, none.

The preceding tables show that the nonpublic schools have 4 per cent of their academic teachers who teach more than the numb of periods per week approved by the North Central Associatio nevertheless, in this respect, the violations of standards by the no public schools are somewhat less than that of the public schools, whi have 9.25 per cent of their academic teachers teaching more than periods per week.

The nonpublic schools likewise have a total of 103 classes, whi are oversize. Of these, 77 are found in the preparatory schools, in the private schools, 1 in the military schools, and none in t parochial schools.

EXPERIENCE OF TEACHERS.

More than one-half of the nonpublic school teachers have had more than 6 years' experience, and over 25 per cent have had over 15 years' experience. The private schools lead in the percentage of most experienced teachers, having 67.1 per cent of them with over 6 years' experience, and nearly half of them with more than 15 years' experience. The percentages of teachers with no experience, and with 1 to 3 years' experience, differ but slightly from those for the public schools. Chart XLVIII shows the percentages of experienced teachers in the various nonpublic schools.

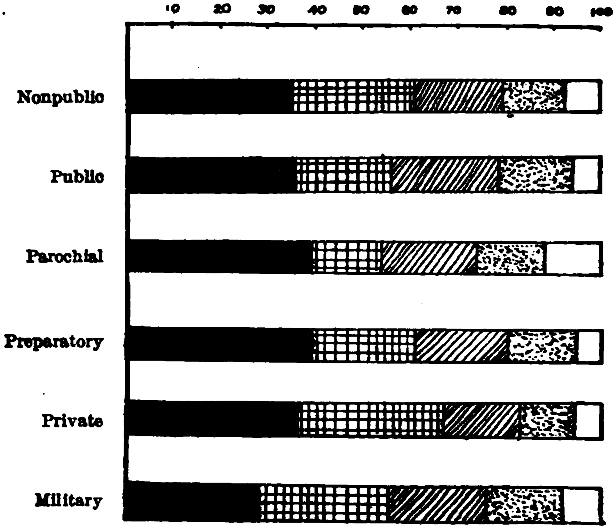

CHART XLVIII.—Experience of teachers. Dark portions indicate percentage with 6 years but less than 15 years; checkered portions, 15 or more years; shaded portions, from 3 to 6 years; dotted portions, less than 3 years; outlined portions, none.

TABLE 121.—*Summary of facts respecting the teaching experience of teachers.*

Classes of schools.	Per cent without previous experience.	Per cent with less than 3 years' experience.	Per cent with 3 but less than 6 years' experience.	Per cent with 6 but less than 15 years' experience.	Per cent with more than 15 years' experience.
Private schools	4.8	11.9	16.2	36.5	30.6
Military schools	7.2	16.6	19.6	28.8	27.8
Preparatory schools	4.7	13.9	20.1	38.3	22.9
Parochial schools	11.6	13.9	20.9	39.5	13.9
All nonpublic schools	5.3	13.5	18.8	36.8	25.5
All public schools	4.9	15.4	23.3	36.6	19.8

SALARIES.

The nonpublic schools have the largest per cent of high-salaried teachers, but as Table 121 shows that they have had on an average more years of experience in teaching, this fact is not surprising, since increase in salary and number of years' experience in teaching usually correlate highly. More than half of the nonpublic-school teachers are receiving more than $1,200, and about one-third of these receive over $1,800. Among the vocational teachers of the nonpublic schools the salaries are much lower than those of the academic teachers. A larger per cent of vocational teachers are receiving salaries under $675 than is true of the academic teachers; while a smaller per cent are receiving $1,800 salaries. This is also true for the public schools.

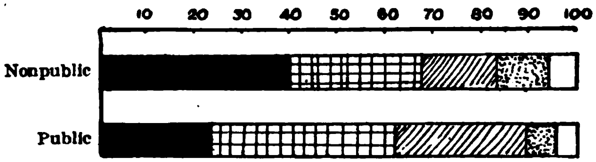

CHART XLIX.—Salaries of academic teachers (in percentages). Dark portions indicate salary of $1,200 to $1,799; checkered portions indicate salary of $900 to $1,199; shaded portions indicate salary of $675 to $899; dotted portions indicate salary over $1,800; outlined portions indicate salary under $675.

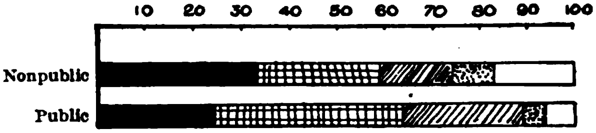

CHART L.—Salaries of vocational teachers (in percentages). Divisions as in Chart XLIX.

TABLE 122.—*Summary of facts respecting the salaries of academic and vocational teachers.*

Classes of teachers.	Per cent with salary less than $675.	Per cent with salary $675 to $899.	Per cent with salary $900 to $1,199.	Per cent with salary $1,200 to $1,799.	Per cent with salary over $1,800.
ACADEMIC.					
Private	4.1	15.7	33.8	32.4	13.9
Military	.0	1.3	28.0	53.3	17.3
Preparatory	7.3	18.5	23.8	42.0	8.3
Parochial	9.5	47.6	38.1	4.7	.0
All nonpublic combined	5.8	16.7	27.3	39.2	11.0
Public schools	4.4	27.2	39.3	22.7	6.4
VOCATIONAL.					
Private	17.5	11.4	27.1	37.7	6.1
Military	5.6	11.8	11.8	29.4	41.1
Preparatory	21.9	18.3	24.7	29.2	4.9
Parochial	28.5	28.5	28.5	14.5	.0
All nonpublic combined	18.6	14.5	25.4	33.1	8.2
Public schools	6.7	25.3	38.8	24.0	5.2

ACADEMIC TRAINING.

Tables 123–126 were compiled from the individual teacher cards. However, all the teachers were not represented, and in interpreting the percentages given, one must bear in mind that they are based on

TABLE 124.—*Professional training of all teachers in nonpublic schools, academic and vocational.*[1]

State.	Teachers reporting.	Number trained in both normal school and college.	Number without credit in education.	Number with less than 11 hours in education.	Number with 11 hours or more in education.
Colorado	24	8	5	3	16
Illinois	383	78	194	71	118
Iowa	19	9	6	0	13
Kansas	54	16	21	6	27
Michigan	31	10	16	2	13
Minnesota	23	3	2	2	19
Missouri	110	31	55	12	43
Nebraska	58	26	8	6	44
North Dakota	30	10	10	3	17
Ohio	86	30	37	15	34
South Dakota	12	2	7	3	2
Wisconsin	57	10	20	8	29
Total	887	233	381	131	375
Percentage		26.3	42.9	14.8	42.3

[1] Indiana report missing, as well as one or two schools from Nebraska, Ohio, Wisconsin, and Michigan.

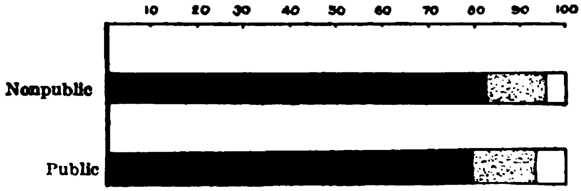

CHART LI.—Departmentally different subjects taught by teachers daily. Dark portions indicate percentage teaching one subject; dotted portions, two subjects; outlined portions, three or more subjects.

TABLE 125.—*Correspondence of subjects of academic specializations and of classroom teaching.*[1]

State.	Number of teachers reporting.	Number teaching academic specialties.	Number not teaching academic specialties.
Colorado	23	20	3
Illinois	333	283	50
Iowa	19	17	2
Kansas	53	51	2
Michigan	29	27	2
Minnesota	23	23	0
Missouri	108	100	8
Nebraska	53	52	1
North Dakota	30	28	2
Ohio	63	51	12
South Dakota	12	12	0
Wisconsin	50	47	3
Total	796	711	85
Percentage		89.3	10.7

[1] See footnote to Table 124.

TABLE 126.—*Number of departmentally different subjects taught by teachers daily.*[1]

State.	One subject.	Two subjects.	Three or more subjects.	State.	One subject.	Two subjects.	Three or more subjects.
Colorado	19	5	0	Nebraska	22	19	17
Illinois	307	43	2	Ohio	32	20	14
Iowa	14	2	1	South Dakota	12	0	0
Kansas	53	1	1	Wisconsin	55	1	0
Michigan	24	6	1				
Minnesota	15	2	6	Total	688	102	43
Missouri	110	0	0	Percentage[2]	82.6	12.3	5.2
North Dakota	25	3	1				

[1] See footnote to Table 124.

[2] Percentages based on number reporting.

LIBRARIES.

Table 127 gives the data respecting libraries in nonpublic schools. These schools have an average of 7,075 volumes per school, and spend annually $548 to maintain each library. The public schools have but 2,304 volumes per school, and spend annually only $221.43 for maintenance.

TABLE 127.—*Number of volumes in the libraries and annual expenditures for library books.*

Types of school.	Number of schools.	Volumes in libraries.	Annual expenditures.	Average number volumes per school.	Average expenditures per year.
Private schools	29	82,121	$8,665	2,933	$309
Preparatory schools	47	496,625	37,181	10,566	791
Military schools	6	14,550	950	2,425	158
Parochial schools	5	22,227	950	4,445	320
Total	87	615,523	47,746	7,075	548

VALUE OF EQUIPMENT.

Table 128 gives the value of the material equipment of various sorts. The comparisons are based on the average value per school.

In physics, chemistry, biology, and manual training the average value of equipments per school is $1,348, $1,102, $1,109, and $885, respectively, as compared with $1,099, $808, $448, and $2,829 for the public schools. Except in manual training, the equipment is more elaborate in the nonpublic schools. Apparently the nonpublic schools are not stressing manual training.

In cooking and sewing the average value of equipment is $462 and $155, respectively, as compared with $668 and $306 for the public schools. The military schools are excluded because they do not teach this work. With respect to cooking and sewing, the public schools have proportionately better equipments.

The same holds true when comparing the average value of equipments in commerce and maps and charts, the figures being $448 and $125, respectively, for the nonpublic schools and $792 and $162 for the public schools.

In physical geography the average value of equipment is nearly the same for the nonpublic and public schools. As for agriculture, evidently the subject has not yet found its way extensively into the nonpublic schools, for very little data concerning it were found in the reports.

With respect to data concerning the value of gymnasiums and playgrounds, startling facts are revealed. The nonpublic schools have an average value of $25,224 per school for gymnasiums and playgrounds, against $6,426 for the public schools. The total value of gymnasiums and playgrounds in the nonpublic schools is $1,942,225, the military schools having gymnasium and playground equipments equivalent to the total value of all other types put together.

The total value of the entire school plant, buildings and grounds, reaches the huge sum of $16,329,957 for the 77 nonpublic schools reporting in this instance. This sum is 12.5 per cent of the entire valuation of the public schools ($130,443,348), though the number of schools reporting is but 7.4 per cent of the number of public schools. Speaking in averages per school, the value of the entire plant for nonpublic schools is $209,358, against $126,398 for the public schools.

In general, it can be said, speaking relatively, the nonpublic schools represent more capital investment, with better equipments in physics, chemistry, biology, and especially in gymnasiums and playgrounds, but in manual training, sewing, cooking, commercial work, and maps and charts the public schools have better equipments. However, one should bear in mind that the average number of pupils per teacher in the nonpublic schools is only half of that of the public schools. This fact tends to decrease the "average value per school," but to increase the "per capita" value of equipment. On such a basis, the nonpublic schools would have the advantage. Chart LII is a comparative representation of average value of equipments in the nonpublic and public schools, omitting representation of gymnasiums and playgrounds.

TABLE 128.—*Summary of average value (per school) for various equipments.*

Kinds of equipment.	Private schools.	Military schools.	Preparatory schools.	Parochial schools.	All nonpublic schools.
Physics	$1,222	$475	$1,560	$977	$1,348
Chemistry	972	400	1,277	1,049	1,102
Biology	642	100	1,190	3,171	1,109
Manual training	350	1,316	1,159	100	885
Cooking	229	....	588	252	462
Sewing	98	....	181	190	155
Commercial	239	533	529	550	448
Physical geography	110	50	108	64	109
Maps and charts	109	70	158	98	125
Playgrounds and gymnasium	8,360	68,833	30,958	2,000	25,224
Entire plant	168,760	259,166	216,282	155,696	209,358

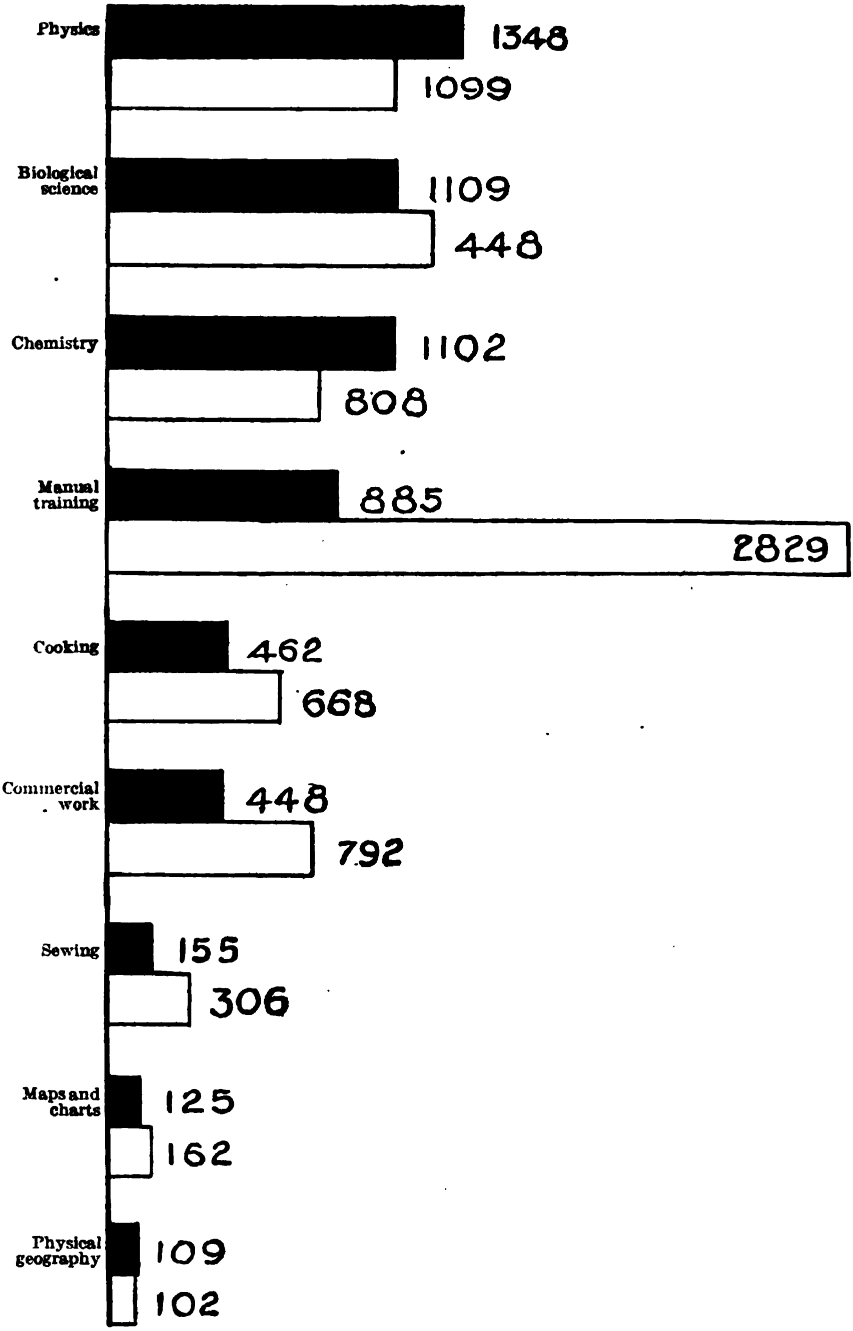

CHART LII.—Average value, per school, of equipment. Dark portions indicate public schools; outlined portions indicate nonpublic schools.

OFFERINGS IN ACADEMIC SUBJECTS.

A study of Table 129 shows that four academic subjects are offered by all of the nonpublic schools, namely, English, algebra, geometry and Latin, which, with the exception of Latin, is true of the public schools. German ranks next to the subjects mentioned above, being found in 96.5 per cent of the nonpublic schools, whereas French is taught in but 62.9 per cent of the nonpublic schools. The languages offered, arranged with respect to the largest percentage of schools offering them, is as follows: Latin first, German second, Spanish third, French fourth, and Greek fifth. The same order holds for the public schools. However, a much larger per cent of nonpublic schools offer Greek, 36.5 per cent of them giving opportunity for the study of this

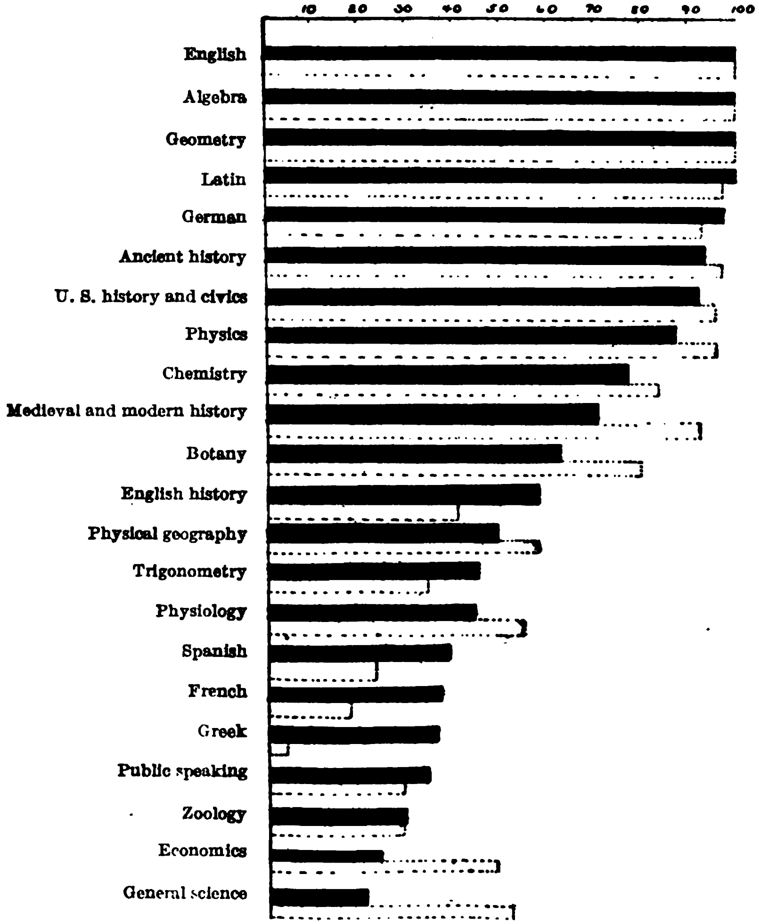

CHART LIII.—Academic offerings (in percentages). Dark portions indicate nonpublic schools; dotted portions, public schools.

language, while in the public schools the percentage is but 3.59 per cent. General science is offered by only 9.7 per cent of the nonpublic schools, but is found in more than half of the public schools. The subjects found in the nonpublic schools arranged according to rank on a percentage basis are as follows: English, algebra, geometry, and Latin leading; followed by German, ancient history, United States history and civics, physics, chemistry, medieval and modern history, botany, English history, physical geography, trigonometry, physiology, Spanish, French, Greek, public speaking, zoology, economy, and general science. Chart LIII shows the extent to which these subjects are offered.

TABLE 129.—*Academic curricular offerings,*[1] *in percentages, in the nonpublic schools.*

Subjects.	Percentages of schools offering, in units.							
	None.	One-half unit.	One unit.	One and one-half units.	Two units.	Two and one-half units.	Three units.	Four units.
English	0.0	....	....	....	....	....	18.7	81.3
Latin	.0	....	....	....	1.1	....	10.5	88.4
Greek	63.5	....	....	....	36.5	....	....	....
German	3.5	....	....	....	36.1	....	37.2	23.2
French	37.1	....	....	....	22.1	....	22.1	18.6
Spanish	61.8	....	8.1	....	24.3	....	5.8	....
Ancient history	4.6	5.8	89.3	....	....	....	....	....
Medieval and modern history	30.3	4.6	65.1	....	....	....	....	....
English history	43.0	10.5	46.5	....	....	....	....	....
American history and civics	8.2	....	72.1	19.7	....	....	....	....
Algebra	.0	....	4.7	23.3	72.0	....	....	....
Geometry	.0	....	18.6	81.4	....	....	....	....
Trigonometry	55.8	44.2	....	....	....	....	....	....
Physics	14.0	....	81.2	1.2	3.6	....	....	....
Chemistry	24.7	....	71.9	....	3.4	....	....	....
Botany	38.3	20.9	40.7	....	....	....	....	....
Zoology	69.9	22.0	8.1	....	....	....	....	....
Biology	79.2	18.5	2.3	....	....	....	....	....
Physiology	56.0	33.6	10.4	....	....	....	....	....
Physical geography	51.3	33.6	15.1	....	....	....	....	....
General science	80.3	8.1	11.6	....	....	....	....	....
Economics	75.6	20.9	3.5	....	....	....	....	....
Public speaking	65.3	22.0	10.4	....	2.3	....	....	....

[1] Three schools offer work in geology and in sociology.

OFFERINGS IN VOCATIONAL SUBJECTS.

It is evident from Table 130 that the offerings in vocational subjects are small, and in comparison with the public schools very small. In only one subject—physical education—do the nonpublic schools have a larger percentage of offerings and this is slight. In all other vocational subjects the public schools have a larger percentage of offerings and in some cases over three times as large. This last statement is true of manual training and commercial arithmetic. The nonpublic schools are much more academic than the public schools and seemingly are much more conservative in introducing the newer vocational subjects. Chart LIV shows the offerings of vocational subjects in graphical form. On an average the nonpublic schools offer 25.3 units

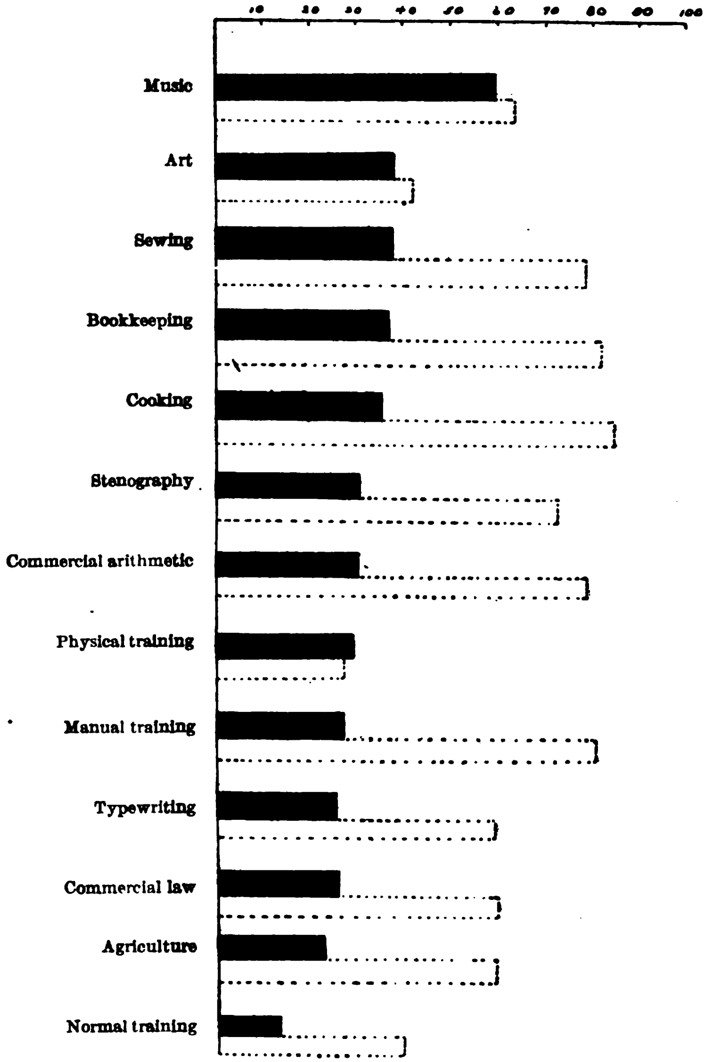

CHART LIV.—Vocational offerings (in percentages). Dark portions indicate nonpublic schools; outlined portions indicate public schools.

of academic subjects and only 5 units of vocational subjects. Table 131 shows the percentages of offerings in academic and vocational subjects in the various types of nonpublic schools.

TABLE 130.—*Vocational curricular offerings, in percentages, in the nonpublic schools.*

Subjects.	Percentage of schools offering, in units.					
	None.	One-half unit.	One unit.	One and one-half units.	Two units.	Three units.
Stenography	70.1		19.5		10.3	
Typewriting	74.5		19.5		5.7	
Commercial arithmetic	71.3	13.8	14.9			
Commercial law	74.7	19.5	5.7			
Bookkeeping	63.2		23.0		13.8	
Manual training	73.6		9.2		5.7	11.5
Cooking	64.2		24.7		11.1	
Sewing	62.9		28.4		8.6	
Agriculture	78.2	6.9	9.2		5.7	
Art	62.9		18.5		16.1	2.4
Music	58.6		23.0		13.8	4.5
Physical education	71.3		20.7		6.9	1.1
Normal training	86.4					

TABLE 131.—*Average number of academic and vocational units offered in each type of nonpublic schools.*

Types of school.	Number of academic units.	Number of vocational units.	Total number of units.	Percentage of academic units.	Percentage of vocational units.
Private school	26.5	5.0	31.5	84.1	15.9
Military school	30.5	7.3	37.8	83.7	16.3
Preparatory school	24.1	4.7	28.8	80.6	19.4
Parochial school	25.0	5.8	30.8	81.2	18.8
All types	25.3	5.0	30.4	83.4	16.6

PART IV.—GENERAL SUMMARY.

The North Central Association at the time of this study (1 comprises 18 States and accredits 87 nonpublic secondary sch and 1,078 public secondary schools. Of the public schools 1,032 considered in this study. Of these, 234 are large schools (en ment over 450), 239 are small schools (enrollment not to exceed 1 and 559 are medium schools (enrollment 151 to 450). These 1 schools (1,032 public and 87 nonpublic) enroll 389,863 pupils, o average of 348 per school. Of these pupils, 213,149 are girls 176,716 are boys, being an excess of 36,433 girls, or an ave excess of 33 per school. Divided by classes, 142,668, or 37.72 cent of the entire enrollment, are freshmen; 102,438, or 27.08 cent, are sophmores; 74,057, or 19.58 per cent, are juniors; and 59, or 15.61 per cent, are seniors.

Taking the *public* schools by themselves, the study shows: B enrolled equal 44.8 per cent; girls enrolled equal 55.2 per c The large schools enroll 55.76 per cent of the entire number of pu in North Central Schools; the medium shools, 37.19 per cent; the small schools, 7.05 per cent. The ratio of teachers to pupil approximately 1 to something between 16 and 25. The num of graduates in 1916 was 52,416, or 13.88 per cent of the en enrollment. Of this number, 20,201 persons, or 38.50 per c entered institutions of higher learning the following autumn. Of enrollment of 377,484 pupils, 51,913, or 13.75 per cent, are residents of the particular school district in which they are attend school.

Concerning the teachers in the public schools, the study sho the numbers to be: Men 6,916 (38.25 per cent); women 11,1 (61.75 per cent); academic 12,420 (67.36 per cent); vocational 6, (32.64 per cent). Of these, 2,982 academic teachers, or 24.04 cent, and 1,747 vocational teachers, or 29.08 per cent, were new the given system the year in which the data for this study w collected. Of the 2,982 new academic teachers, 149, or 4.98 cent, are lacking a college degree; 368, or 12.30 per cent, are lacki the prescribed amount of 11 semesters hours in education; and 6 or 22.06 per cent, were teaching their first year in public schoo If all the teachers (and not merely academic teachers or n teachers) be considered, the study reveals that 71, out of appro mately 17,000 persons who replied to the queries, hold the degree

Ph. D.; 1,668 hold a master's degree; 4,323 have had training in both normal school and university; 4,529 have no college credit in education; 1,905 have some college credit in education, but not 11 semesters hours; and 10,500 have college credit in education equal to or exceeding 11 hours. Of the 6,007 vocational teachers, 2,454, or 40.85 per cent, hold a college degree.

In teaching experience the tables show the following: 4.90 per cent of all teachers have had no previous experience; 15.37 per cent have had less than 3 years'; 23.31 per cent have less than 6 years'; 36.59 per cent have less than 15 years'; and 19.81 per cent have more than 15 years'.

Respecting the length of the school day, 30 report having a five-period day, 85 a six-period day, 516 a seven-period day, 330 an eight-period day, and 39 more than eight periods per day. Likewise, 470 have class periods of 40 minutes; 480, class periods of 45 minutes; 26, class periods of 50 minutes; and 66, still longer class periods.

Among the 12,420 academic teachers, 8,973 teach no more than five periods per day; 3,666 teach six periods per day; and 305 teach seven periods per day. Moreover, 1,149 persons are occupied with school work in excess of the maximum number of thirty-five 45-minute periods per week.

Again, of the 17,000 persons answering the direct query, 13,499, or 79.71 per cent, are teaching the subjects in which they specialized in college or university, leaving 1,911, or 11.28 per cent, who are teaching, in part at least, work for which they had not been specifically prepared to teach. Still further, 13,003, or 78.89 per cent of the teachers reporting, are confining their teaching to a single department of study; 2,862, or 17.36 per cent, distribute their energies over two fields of interest; 538, or 3.26 per cent, teach in three departments of instruction; and 76 persons scatter their attention over more than three fields.

In regard to salaries, 6.66 per cent of all teachers were receiving less than $675 per annum; 25.29 per cent were receiving something between $675 and $899; 38.84 per cent were receiving between $900 and $1,199; 24.01 per cent were receiving between $1,200 and $1,799; and 5.17 per cent were receiving over $1,800.

Considering the buildings and equipment, the report shows 33.43 per cent of the schools to have been erected since 1910, and 21.60 per cent of them in the half decade from 1905 to 1910. The 1.032 public schools contain 2,477,882 volumes in their libraries, or an average of 2,307 volumes per school, and each school is expending annually $221.43 for library purposes.

TABLE 132.—*Value of other equipment.*

Equipment.	Total value.	Value per school.
Physics	$1,134,952	$1,099
Chemistry	834,161	808
Biology	462,884	448
Physical geography	105,283	117.91
Agriculture	158,420	153
Manual training	2,920,553	2,829
Cooking	689,230	668
Sewing	316,498	306
Commercial work	817,601	792
Maps and charts	167,684	162
Gymnasium and play grounds	6,632,214	6,426
Complete plant	130,443,348	126,398

TABLE 133.—*Program of academic studies, in percentages.*

Subjects.	Percentage of schools offering, in units.						
	None.	One-half unit.	One unit.	Two units.	Three units.	Four units.	Over 4 units.
English					8.33	85.17	6.49
Latin	2.32			8.52	8.43	80.71	
Greek	96.41			3.59			
German	5.62			45.73	24.61	24.03	
French	82.65			7.46	5.62	4.26	
Spanish	77.32		3.68	15.01	3.97		
Ancient history	4.07	4.84	91.08				
Medieval and modern history	9.59	5.52	84.20				
English history	56.97	17.73	25.29				
United States history and civics	4.84	1.84	74.42	[1] 18.95			
Algebra			7.84	[2] 92.14			
Geometry			16.95	[3] 83.04			
Trigonometry	65.40	34.60					
Physics	1.84		95.93	[3] 2.22			
Chemistry	17.92		76.16	[3] 6.00			
Botany	30.13	35.37	21.58	[3] 2.90			
Zoology	70.44	21.11	7.65	[3] .77			
General biology	80.62	18.99					
Physiology	46.51	46.89	6.58				
Physical geography	43.21	40.60	16.18				
Geology	92.68	5.62	1.74				
General science	48.25	18.31	23.43				
Sociology	96.02	3.10	.87				
Economics	52.13	44.08	3.77				
Public speaking	69.67	[4] 16.75	11.04	2.52			

[1] More than 1 unit. [2] Either 1½ or 2 units. [3] 1½ units. [4] ½ and ½ units.

TABLE 134.—*Vocational subjects.*

Subjects.	Percentage of schools offering, in units.						
	None.	Less than one.	One unit.	One and one-half units.	Two units.	Three units.	Four units.
Art	58.13	21.12	[1] 13.95			[2] 6.78	
Music	37.20	41.18	[1] 18.12			[2] 3.48	
Agriculture	41.46	15.79	22.83		7.54	4.06	7.26
Cooking	16.66		52.13		25.58	[3] 5.62	
Sewing	21.22		48.51		24.41	[3] 5.81	
Manual training	21.60		20.25		34.69	8.43	15.01
Bookkeeping	18.31		41.86		35.85	3.48	.48
Typewriting	31.78		39.43		26.35	2.22	.62
Stenography	28.77		26.93		41.66	2.42	.02
Commercial law	40.69	54.16	5.13				
Commercial arithmetic	22.86	44.47	32.65				
Normal training	60.27	[4] 34.78					[5] 4.85
Physical education	73.64		18.31		5.71	.77	1.55

[1] One to 3 units.
[2] Over 2 units.
[3] More than 3 units.
[4] One-half to 5 units.
[5] Over 5 units.

The typical public secondary school accredited by the North Central Association has, therefore, the following characteristics: It is located in a town with a population of 13,518; has an enrollment of 365 pupils, 164, or 44.8 per cent, being boys, and 201, or 55.2 per cent, being girls; and has 55, or 15.39 per cent, pupils in the senior or fourth-year class; 70, or 19.42 per cent, pupils in the junior or third-year class; 97, or 27.15 per cent, pupils in the sophomore or second-year class; 137, or 38.02 per cent, pupils in the freshman or first-year class; and 6, or 0.02 per cent, pupils who are graduate students or unclassified pupils. Such a typical school maintains a ratio of teachers to pupils enrolled of one to something between 16 and 25, and provides a school year of approximately 37 weeks. From this school were graduated 51 pupils in 1916, being 13.88 per cent of the entire high-school enrollment, and being divided in respect to sex in the ratio of 41.85 boys to 58.15 girls. Of the number which graduated, 16 or more (being 38.14 per cent of the whole number) entered institutions of higher learning the following fall. Also, in this typical school of 365 pupils are enrolled 13.75 per cent (or over 50 persons) who are nonresidents in the school district. For the most part, no doubt, these are rural inhabitants.

This typical school likewise employs 17.6 teachers, 12, or 67.36 per cent, for academic work, and 5.6, or 32.64 per cent, for vocational work. Of these teachers, 6.8, or 38.25 per cent, are men, and 10.8, or 61.75 per cent, are women. Of these teachers, 24.61 per cent (that is, 4 or 5 in the typical school) are new to the given system each year. Of the new teachers, only 4.98 per cent are lacking a college degree, only 12.30 per cent are lacking a systematic professional training to the extent of 11 semester hours, and all have had previous teaching experience in some other system of schools except in the cases of 22.06 per cent of the entire number. Among the teachers not new to the given school system, only 10.31 per cent are lacking in college degrees, and 20.14 per cent are without the prescribed amount of professional training now demanded by the association of the new teachers. Taking the entire corps of teachers in the typical high school, 4.90 per cent have had no previous teaching experience; 15.37 per cent have had less than the 3 years' experience; 23.31 per cent have had less than 6 years' experience; 36.59 per cent have had less than 15 years' experience; and 19.81 per cent have had more than 15 years' experience. Of the vocational teachers, 40.85 per cent possess college degrees and 5.11 per cent are teaching academic subjects as well as vocational subjects.

The typical school has a seven-period day, with an average of 43.2 minutes per period. The typical salary of teachers in a typical North Central school is between $900 and $1,199.

The typical accredited school is housed in a spacious, sanitary, hygienic building which has been erected some time within the past 15 years. Such a building contains a library of 2,307 volumes, and there are appropriated for its maintenance and expansion annually the sum of $221.43. This building also has equipment as follows:

TABLE 135.—*Equipment of the typical accredited school.*

For the sciences:		For the arts:		For miscellaneous work:	
Physics	$1,099	Agriculture	$153	Commercial work	$792
Chemistry	808	Manual training	2,829	Maps and charts	162
Biology	448	Cooking	668	Gymnasiums and playground	6,426
Physical geography	118	Sewing	306	Entire school plant[1]	126,398
Total	2,474	Total	3,958		

[1] Building, grounds, etc.

TABLE 136.—*Program of studies in the typical school, expressed in units.*

English	4	Geometry	1½	Sociology	0	French	0
Spanish	0	Zoology	0	Agriculture	½–1	United States history	1
Algebra	1½	General science	½–1	Typewriting	1–2	Chemistry	1
Botany	½	Music	0–1	Physical training	0	Physical geography	½
Geology	0	Bookkeeping	1–2	German	2	Public speaking	0
Art	0	Normal training	0	English history	0	Sewing	1
Manual training	1–2	Greek	0	Physics	1	Commercial law	½
Commercial arithmetic	½–1	Medieval and modern history	1	Physiology	½	Total	27–32
Latin	4	Trigonometry	0	Economics	0		
Ancient history	1	General biology	0	Cooking	1		
				Stenography	1–2		

Finally, in the typical school here considered there is about one chance in 250 that one teacher holds a Ph. D. degree, that one teacher in 10 holds an A. M. or M. S. degree, that one teacher in 4 has been educated both at a normal school and a college, that one teacher in 10 (approximately) is teaching one or more subjects for which he never prepared himself especially to teach, and that approximately 8 out of 10 teachers are teaching in one branch or department of study only.

THE NONPUBLIC SCHOOLS.

Taking the nonpublic schools by themselves, the study reveals the following facts: Out of 1,165 schools accredited, only 87 are of a nonpublic character; these 87 are divided once more into four fairly distinct groups; namely, 29 purely private schools, 6 military schools, 5 parochial schools, and 47 schools attached as preparatory departments to institutions of higher learning.

Enrolled in the 87 nonpublic schools are 12,355 pupils, an average of 142 per school. Of these, 7,472, or 60.25 per cent, are boys, and 4,889, or 39.75 per cent, are girls. The total enrollment, therefore, of these nonpublic schools is less than 1 per cent of the enrollment of the accredited public schools.

In 1916, from these 87 nonpublic schools, 2,535 students graduated, and of these persons 1,460, or 57.6 per cent, entered institutions of higher learning the succeeding autumn. The teachers in the nonpublic schools number 1,175, being an average of 13.5 per school and a ratio of 1 teacher to 10 pupils. Of the teachers, 54.3 per cent are men; 45.7 per cent are women. Classified in accordance with the work provided, 74.2 per cent are academic teachers and 25.8 are vocational teachers. Of the 872 academic teachers employed, 203, or 23.2 per cent, were new to the given system in 1916; and of these new academic teachers, 5.3 per cent held no college degree, 21.6 per cent were without the prescribed 11 hours of professional training, and 17.2 per cent had had no previous teaching experience. On the other hand, 159, or 52.40 per cent of all the vocational teachers (new and old together), are college graduates.

Of the academic teachers, 38, or 4.3 per cent of the total number were teaching more than 35 class periods per week, and 103 separate classes (mostly in science) enroll more than 30 pupils each.

Respecting teaching experience, 13.5 per cent of the nonpublic school teachers had had less than 3 years' teaching experience; 18.18 per cent had had less than 6 years'; 36.8 per cent had had less than 15 years'; and 25.5 per cent had had more than 15 years'.

As regards salaries paid, 18.6 per cent of the nonpublic school teachers were receiving less than $675 per annum; 14.5 per cent received from $675 to $899; 25.4 per cent received between $900 and $1,199; 33.1 per cent received between $1,200 and $1,799; and 8.2 per cent received over $1,800.

TABLE 137.—*Equipment of 87 nonpublic schools.*

	Total.	Average per school.
Libraries........number of volumes..	615,523	7,075
Physics........value..	$115,951	$1,348
Chemistry	$90,357	$1,102
Biology	$82,052	$1,109
Manual training	$56,639	$885
Cooking	$32,839	$462
Sewing	$10,985	$115
Commercial work	$31,833	$448
Physical geography	$7,289	$109
Maps and charts	$10,364	$125
Gymnasiums and playgrounds	$1,942,275	$25,221
School plant	$16,329,957	$209,358

In the subject matter offered in the nonpublic schools there is the same range which is found in the public schools. The comparison for the several subjects is best shown by Charts LIII and LIV (pp. 129–131).

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 46

BIBLIOGRAPHY OF HOME ECONOMICS

By

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BUREAU OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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BIBLIOGRAPHY OF HOME ECONOMICS.

INTRODUCTION.

The bulletin is a revision of Bureau of Education Bulletin, 1914, No. 39, Education for the Home, by Dr. Benjamin R. Andrews, with the addition of books published since that date. The bibliography has been made as exhaustive as limitations of time and facilities permit. It is not offered as a suggestive home economics library for schools. Such a library should be chosen with careful consideration of the special needs of the school, and in most cases need not be all inclusive.

Annotations have been presented in only a few cases where the title of the book does not fully reveal the nature of the contents. For most of the annotations acknowledgement is made to the library bulletin of the State College of Washington, Pullman, Wash. In every case possible the date of publication is given, for it is felt that the value of some of the books, particularly those of scientific nature, rests in large part upon their being of recent date. So far as possible the prices given are the latest listed. Some of the books included in the lists are now out of print, but the student of home economics who desires to study these older books may find them in the larger libraries.

For the convenience of students the bibliography has been classified into general groups. A great number of the books might be classified under several topics but it has been thought best not to expand the text needlessly by repeating titles. For example, many of the books that treat of woman in her social and economic relations help to throw light on the history of the home economics movement. The student who makes intelligence use of the bibliography will bear this in mind and look under all closely related topics for the helps needed.

CLASSIFICATION.

I. Bibliographies.
II. Bulletins:
  1. State extension departments and schools.
  2. Miscellaneous.
III. Syllabuses and circulars. (State and city departments of education, associations and schools.)
IV. Charts for reference study.
V. Periodicals.

- VI. Teaching:
  - 1. History of the movement.
  - 2. Methods of teaching.
    - A. General.
    - B. Special: 1. Correspondence schools; 2. Kitchen gardens; 3. Rural schools; 4. Vocational mathematics for girls.
- VII. Clothing and textiles:
  - 1. Costume design.
  - 2. Dressmaking.
  - 3. Dyeing.
  - 4. Embroidery, knitting, etc.
  - 5. Hygiene of clothing.
  - 6. Millinery.
  - 7. Textbooks in sewing.
  - 8. Textiles:
    - (a) Chemistry.
    - (b) Industries.
    - (c) Manufacture and sale.
    - (d) Mills—Condition of workers.
- VIII. The family:
  - 1. The child.
  - 2. Organization of the family.
  - 3. The home:
    - (a) General literature.
    - (b) Economic problems.
    - (c) Motherhood.
    - (d) Recreation in the home.
    - (e) Social problems.
  - 4. Women.
  - 5. Women in industry.
- IX. Foods and cooking:
  - 1. Cook books.
  - 2. Food conservation.
  - 3. Food preservation.
  - 4. Food study.
  - 5. Infant feeding.
  - 6. Institutional feeding.
  - 7. Invalid cookery.
  - 8. Rural school lunches.
  - 9. School feeding.
  - 10. Textbooks in cooking and home making.
- X. The house and household activities:
  - 1. Administration. (*See* Management of the house.)
  - 2. Care of the house. (*See* Management of the house.)
  - 3. Construction of the house.
  - 4. Domestic service. (*See also* Women in industry.)
  - 5. Furnishings for the home.
  - 6. Home nursing.
  - 7. Household accounts.
  - 8. Housewifery. (*See* Management of the house.)
  - 9. Laundry work.
  - 10. Management of the house.
  - 11. Marketing.

X. The house and household activities—Continued.
  12. Sanitation.
  13. Table service and table etiquette.
  14. Textbooks in home making.
XI. Sciences related to home economics:
  1. Bacteriology.
  2. Chemistry.
  3. Hygiene and physiology.
  4. Nutrition and dietetics.
  5. Physics.
  6. Physiological chemistry.

I. BIBLIOGRAPHIES.

[Bibliographies of home economics books have been prepared by many public libraries, school libraries, home economics students, home economics associations, and other organizations. The bibliographies herein listed represent those which have been received at the bureau. Each bibliography offers individual features in classification or annotations that may be of interest to the student. Bibliographies of value may also be found in many reference and textbooks at the ends of the chapters or in the appendices.]

Boston. Public library. List of books on domestic science in the public library of the city of Boston. Boston, Public library, 1911. 78 p.

—— —— A selected list of books on domestic production and preservation of foods. 1917. 14 p.

Brooklyn, N. Y., public library. Doing your bit at home. Some library books that will help you. December, 1917.

Chicago, Ill. Public library. Bibliography: "The high cost of living." *Included in* Book bulletin, March, 1917.

—— —— Books on domestic economy. Chicago, 1906.

—— —— Books on domestic economy added, 1911–15. p. 243–48.

—— —— —— 1916. p. 51–53.

—— —— —— 1917. p. 46–47.

Columbia university. Teachers college. School of household arts. Annotated list of books relating to household arts. New York, Teachers college, publication bureau, 1910. (Technical education, Series A, no. 2.) 15 cents.

New edition brought out in 1914 (Technical education bulletin, no. 25), 25 cents. A revised edition was published in 1916.

Cumulative book index. Published monthly except February, August, and December, by the H. W. Wilson co., 958–64 University ave., New York city.

See Home economics and other subjects.

Illinois. University of Illinois, Urbana. High school libraries. Based on recommendations made to the High school conference. Domestic economy. (Bulletin no. 33, 1917.)

Iowa. Iowa state college of agriculture and mechanic arts. Agricultural extension department, Ames. [Valuable books and bulletins on home economics.] (Home economics circular no. 6, 1916–17.)

Journal of home economics, 1211 Cathedral street, Baltimore, Md. Bibliography of current home economics literature, 1909 to date. Each issue. Journal of home economics.

Langworthy, Charles F. State and municipal documents as sources of information for institution managers and other students of home economics. Journal of home economics, February, 1912. Reprint, 10 cents.

Minneapolis, Minn. Public library. Selected list of books on home economics, 1914.

Contains some annotations.

Nims, Marion R. Women in the war. A bibliography. Washington, D. C., News department of the Woman's committee, Council of national defense, 1918. 77 p.

Oregon. Library commission. (State house, Salem, Oreg.) Domestic economy; Home life. Rev. ed. (Subject list no. 2, January, 1913.)

Publishers' weekly. Classified bibliographies of recently published books. Household economics. In occasional numbers. Publishers' weekly, 241 West 37 street, New York city.

Reader's guide to periodical literature. Published monthly by the H. W. Wilson co., 958–964 University ave., New York city. 1910 to date. Monthly.

See Domestic science, Home economics, etc.

Shaw, Robert Kendall. Bibliography of domestic economy, in English. Albany, N. Y., University of the State of New York, 1901. (31)–170 p. (New York state library. Bulletin 52, January, 1901.)

Covers literature of 1850–99, inclusive.

Stout institute. Outlines of home and social economics. Bulletins. No. 1, March, 1914: The ethics of family life; Disintegration of the modern family; Education for parenthood; The domestic service problem. No. 2, June, 1914: Women in modern industry; Women in social service.

United States. Department of Agriculture. Division of publications. Farmers' bulletins. Current list of numbers available free.

List of publications issued since July 1, 1918. Revised to December 31, 1916. *See also* United States, Superintendent of documents, Government printing office, Washington, D. C. Price lists.

—— **Department of the interior. Bureau of education.** Bibliography of education in agriculture and home economics. Washington, Government printing office, 1912. 62 p. (Bulletin, 1912, no. 10.)

—— —— —— Bibliography of school lunches. Compiled by Lucy Condell. Washington, Government printing office, 1917. (Circular.) 5 cents.

—— —— —— Education for the home. Washington, Government printing office, 1914. (Bulletin, 1914, no. 39.) 10 cents.

List of references on education for the home.

—— —— —— Guide to United States government publications. Washington, Government printing office, 1918. (Bulletin, 1918, no. 2.) 20 cents.

—— —— —— Library books for high schools. Washington, Government printing office, 1917. (Bulletin, 1917, no. 41.) 15 cents.

—— —— —— Monthly record of current educational publications. Washington, Government printing office, 1914.

United States. Department of the interior. Bureau of education. References on home economics. (Library leaflet, May, 1914.)

——— **Food administration.** Food conservation bibliography. References and sources of information on production, statistics, distribution, conservation, and methods of control of food supplies. February, 1918.

——— **Library of congress. Division of bibliography.** List of references on the conservation, production, and economic use of foods. Mimeographed. Sent free to libraries on application. 1917.

——— ——— ——— The United States at war. Organization and literature. Washington, Government printing office, 1917. 115 p. 10 cents.

——— **Superintendent of Documents, Government Printing Office, Washington, D. C.** Price list, 11—Foods and cooking. Price list, 16—Farmers' Bulletins. Price list, 40—Chemistry of foods and drugs. Price list, 68—Farm management.

Washington. State college of Washington. Home economics. A bibliography for high schools prepared by the Department of home economics of the State college of Washington. Pullman, Wash., Published by the State college of Washington, 1913. 23 p.

——— ——— Bibliography of the economics of textiles and clothing. Pullman, Wash., 1918. (Library bulletin no. 6. Home economics series no. 3.) 44 p. 25 cents. $10 per hundred.

——— ——— Food economy for the housewife. Pullman, Wash., 1917. 34 p. (Library bulletin no. 3. Home economics series no. 1.) 25 cents. Second edition, 1918, 59 p. (Library bulletin no. 5. Home economics series no. 2.) 25 cents.

II. BULLETINS.

[It is impossible to present a complete list of the bulletins that have been published on home economics subjects by State extension departments, State schools, and by miscellaneous organizations. However, a partial list gives some conception of how extensive is the available information in this form. State publications are usually free to every one in the State. Every student should have her name placed on the home economics mailing list of the institutions in her own State and keep complete files of all publications that may be of value to her in her teaching.]

1. STATE EXTENSION DEPARTMENTS AND SCHOOLS.

Alabama. Tuskegee normal and industrial institute, Tuskegee. Canning and preserving fruits and vegetables in the home. By George W. Carver.

——— ——— The pickling and curing of meat in hot weather. Carver.

——— ——— Some possibilities of the cowpea in Macon county, Alabama. Carver.

——— ——— White and color washing with native clays from Macon county, Alabama. Carver.

Arkansas. State agricultural school, Monticello. Breads. Monthly bulletin, March, 1918.

California. University of California, Berkeley. Home and farm canning. (Circular no. 158, 1917.)

——— ——— Home economics recipes. By Mary B. Vail. (Syllabus series no. 35, 1912.) 25 cents.

——— ——— The household as an economic agent: record sheets for the cost of living. Revised, 1912. (Syllabus series no. 10.) 35 cents.

Colorado. Agricultural college, Fort Collins. Domestic water supply. By U. M. Cone.

——— ——— Household arts and agriculture for the rural school.

——— ——— **Extension service.** Girls' cooking club household exhibits at fairs. 1917.

——— ——— ——— Girls' sewing club, 1st year, 2d year. 1916.

——— ——— ——— Meats and meat cookery. Home curing of meats and their preparation. 1917.

Connecticut. Agricultural experiment station, New Haven. Economy in feeding the family: 1. Some essential facts regarding nutrition. 1917. (Bulletin 196.) 2. The cereal breakfast foods. 1917. (Bulletin 197.) 3. Food oils and fats. 1918. (Bulletin 201.)

Delaware. Delaware college, Newark. Division of agricultural extension. Food values of apples and corn. 1915.

Idaho. University of Idaho. Agricultural extension department. Home economics division. Rural school lunches. 1913–1914.

——— ——— **Department of home economics.** 1. In cooperation with the State department of public instruction, publishes the following bulletins for the boys' and girls' clubs of the State: Bread contest clubs, Sewing, Rural school lunch.

2. Lessons for movable schools. (Extension bulletin No. 4.)

Illinois. University of Illinois, Urbana. Department of household science. Cooking of carp. Chocolate and cocoa. By Nellie E. Goldthwaite.

——— ——— ——— Meat. By Lucile Wheeler.

——— ——— ——— The planning of meals. By Isabel Bevier.

——— ——— ——— Principles of jelly making. By Nellie E. Goldthwaite.

——— ——— ——— Some points in choosing textiles. By Charlotte Gibbs.

——— ——— ——— Some points in the making and judging of bread. By Isabel Bevier.

——— ——— ——— Some points to be considered in the planning of a national diet. By Susannah Usher.

——— ——— ——— Syllabus of domestic science and domestic art for the high schools of Illinois.

——— ——— ——— War time suggestions for home economics. Exhibits at county and community fairs. (Education circular no. 25.)

Indiana. Purdue university, La Fayette. Agricultural extension department. I. Bulletin of university: Helps for teachers in agriculture and domestic science Nos. 1, 3, 5, 7.

II. Bulletins of Department of agricultural extension: Agricultural and industrial work in the schools of Hamilton county; Domestic science in the high school; Domestic science in rural communities; Some points in bread making; Helps for club members—girls' sewing clubs.

——— ——— ——— New uses for old clothing.

——— ——— ——— Textiles: Problems in buying, cleaning and dyeing.

Iowa. State college of agriculture and the mechanic arts, Ames. I. Short course class notes: No. 1. Demonstration—bread lessons. No. 2. Demonstration—meats. No. 3. Demonstration—vegetables. No. 4. Demonstration—eggs and milk. No. 5. Demonstration—cereals and other starchy foods. No. 6. Home nursing. No. 7. Personal hygiene. No. 8. Demonstration—practical dietetics. No. 8. Home management. No. 9. Vegetables. No. 10. Caloric value of foods—nutrition. No. 11. Company supper. No. 12. Demonstration—soups and serving. No. 13. Demonstration—cake. No. 14. Salads. No. 15. Public and home sanitation. No. 16. Demonstration—potatoes. No. 17. Demonstration—desserts. No. 19. Entrees. No. 20. Everyday meat dishes. No. 21. Beverages. No. 22. The care of children. No. 23. Fruit.

II. Home economics circulars: No. 1. Planning and serving meals. No. 2. Textiles. No. 3. List of valuable books and bulletins for home economics. No. 4. Suggestions for household exhibits.

——— ——— **Agricultural extension department.** Junior circulars. Garment making club. Part I. Preparatory work. Part II. Iowa boys' and girls' clubs.

Kansas. State agricultural college. Meals for harvest time. (Home economics bulletin no. 1.)

——— ——— Steam pressure for home cooking. (Home economics bulletin no. 2.)

——— **State council of defense.** Use of wheat-saving cereals. (Circular 9.)

——— ——— ——— One-dish meals. (Circular 10.)

Maine. University of Maine, Orono. Agricultural extension service. Vegetable storage on the farm. (Extension bulletin No. 120, August, 1918.)

——— ——— **Department of domestic science.** Care of food in the home. By Dorothea Bacon.

——— ——— ——— Classified bibliography of home economics.

——— ——— ——— Home furnishing and decoration. By Lillian Randall.

——— ——— **Extension department.** The scope and nature of domestic science as taught in the university. 1912.

——— ——— ——— Classified bibliography of home economics. 1913.

——— ——— ——— Notes on house furnishing. 1914.

——— ——— ——— A plan for the developmnt of home economics along the line of practical education. 1914.

——— ——— ——— The housekeeper's problems. 1915.

——— ——— ——— The nutritive value of food. 1916.

By Helen Binkerd Young. (7) Household furnishing By Helen Binkerd Young. (9) Reading in the farm home. By Martha Van Rensselaer *and* Caroline Webster. (11) The laundry. By Flora Rose. (13) Cornell study clubs. By Martha Van Rensselaer *and others*. (15) Principles of jelly-making. By N. E. Goldthwaite. (17) The preservation of food in the home, Part I. By Flora Rose. (19) The preservation of food in the home, Part II. By Flora Rose. (21) The preservation of food in the home, Part III. By Flora Rose *and others*. (23) Methods of cleaning. By Mary Urie Watson. (25) Saving strength. By Emily M. Bishop *and* Martha Van Rensselaer. (33) Vegetable-gardening. By Albert E. Wilkinson. (35) The flower garden. By Albert A. Wilkinson. (39) The farmhouse. By Helen Binkerd Young. (41) Rules for planning the family dietary. By Flora Rose.

New York. State college of agriculture, Cornell University, Ithaca. Department of home economics. Food series lesson 121. Sugar-saving desserts and confections.

——— ——— Lesson 122. How to use the apple crop.

——— ——— Rural life series lesson 120. Civic duties of women.

North Carolina. State board of education. Manual for the teaching of agriculture, home economics, and manual training. (Agricultural bulletins, 1, 6th grade; 2, 7th grade.)

——— State college of agriculture and engineering, Raleigh. Agricultural extension service. Plans for community club work in the study of foods and household conveniences. 1916. (Extension circular no. 7.)

——— ——— Drying of fruits and vegetables for home consumption. 1917. (Extension bulletin no. 50.)

North Dakota. Agricultural college, Agricultural college station. Home economics, bread making, salad making, and candy making. (College extension department. Bulletin, vol. 6, no. 8.)

——— ——— Preservation of food in the home. (Agricultural extension bulletin no. 3.)

——— ——— Preservation of meat. (Agricultural extension bulletin no. 12.)

——— ——— The rural hot lunch. (Agricultural bulletin no. 4.)

——— ——— Wheat saving recipes. (Dept. of agriculture experiment station. Food bulletin, vol. 5, no. 5.)

Ohio. Agricultural college. Extension service. Home economics outline for teaching food conservation. (Bulletin, 1917–18, no. 14.)

——— ——— ——— Meat and meat substitutes. (Bulletin, 1914, no. 4.)

——— ——— ——— Meat substitutes. (Bulletin, 1917–18, no. 8.)

——— ——— ——— Outline of home economics for club study. (Bulletin, 1915.)

——— ——— ——— Planning of meals. (Bulletin, 1916–17, no. 3.)

——— ——— ——— Preservation of food. (Bulletin, 1918–19, no. 19.)

——— ——— ——— Saving wheat. (Bulletin, 1917–18, no. 9.)

——— ——— ——— School lunches: Lesson 1. Milk. Lesson 2. Creamed soups. Lessons 3 and 4. Starch. Lesson 5. Starchy foods—potatoes. Lesson 6. Starchy foods—rice. Lesson 7. Vegetables. Lesson 8. Fruit. Lesson 9 Sugar. Lesson 10. Meat substitutes. Lesson 11. Meat substitutes. Lesson 12. Salads and salad dressing. Lesson 13. Meat substitutes—cheese. Lesson 14. Meat extenders. Lesson 15. Creamed meats. Lesson 16. Tough meats. Lessons 17 and 18. Flour and flour mixtures. Lesson 19. Suggestions for the lunch box. Lesson 20. Suggestions for planning and serving a luncheon. (Bulletin, 1917–18, no. 17.)

Ohio. Agricultural college. Extension service. Supplement to the series of 20 lessons for rural schools. (Bulletin, 1918–19, no. 3.)

——— ——— ——— Serving of meals. (Bulletin, 1917–18, no. 2.)

——— ——— ——— Serving. (Bulletin, 1916–17, no. 9.)

——— ——— ——— Suggested plans for serving lunches in centralized schools of Ohio. (Bulletin, 1917–18, no. 5.)

——— ——— ——— Teaching of home economics in rural schools in connection with school lunches. (Bulletin, 1917–18, no. 16.)

——— State university, Columbus. The canning of fruits and vegetables; Fruit and vegetable canning; Jellies, jams, preserves and pickles; Bread and bread making; Sanitation. (Home makers' reading course, 1910–11.)

——— ——— Meats, cereals, and kitchens. (Home makers' reading course, 1912.)

Oklahoma. Agricultural and mechanical college, Stillwater. Sewing for girls in sewing contest; cooking; home canning, for girls in canning contest; plan for 1914 scholarship contests. By Henrietta Kolshorn. (Boys' and girls' agricultural clubs. Cooking lessons, 4, 5, 6.)

Oregon. Agricultural college, Corvallis. Extension service. Evaporation of fruits and vegetables in the home. (Extension bulletin 296.)

——— ——— ——— Emergency first aids. (Extension bulletin 208, 1917.)

——— ——— ——— Food for the family. (Extension bulletin 202.)

——— ——— ——— Liberty breads. (Extension bulletin 289.)

——— ——— ——— Substitutes for meat. (Extension bulletin 216.)

——— ——— ——— Sugar and sugar substitutes. (Extension bulletin 299.)

——— ——— ——— Use of dried fruits and vegetables. (Extension bulletin 218.)

——— ——— ——— Wheatless recipes. (Extension bulletin 293.)

——— ——— School of domestic science and art. Camp cookery. By Miss Smith *and* Miss Milam. Principles of bread making. By Dean Calvin. Principles of jelly making. By Miss Milam. Principles of cake making. By Miss Milam. School luncheons. By Dean Calvin. Department recipes. By Dean Calvin.

Pennsylvania state college. School of agriculture and experiment station. State College, Penn. Undergarment making. (Extension circular no. 75. November, 1918.)

South Carolina. Winthrop normal and industrial school, Rock Hill. Home demonstration course for women. 1916.

——— ——— Home demonstration work. Four-year sewing course for girls' home demonstration clubs.

——— ——— A plan for homekeepers' clubs in South Carolina. (Homekeepers' club bulletin, part 2.)

——— ——— Women's club programs in home economics.

Tennessee. College of agriculture (University of Tennessee). Division of extension. A budget for the business woman. (Publication no. 66.)

——— ——— ——— A budget for the family. (Publication no. 65.)

——— ——— ——— Beautifying the home grounds. (Publication no. 32.)

——— ——— ——— Domestic science course of study. (Publication no. 52.)

——— ——— ——— Eating the right food at the right time. (Home economics series no. 13.)

——— ——— ——— Good light bread. (Home economics series no. 7.)

——— ——— ——— How to choose woolens. (Home economics series no. 6.)

——— ——— ——— Score cards. (Home economics series no. 15.)

——— ——— ——— Tuberculosis can be cured; start now. (Home economics series no. 12.)

——— ——— ——— Typhoid fever; a preventable disease. (Home economics series no. 11.)

——— ——— ——— Use meat in many ways. (Home economics series no. 9.)

——— ——— ——— What to do to keep well. (Home economics series no. 8.)

——— ——— What to do when cleaning house. (Home economics series no. 4.)

——— ——— What to do with vegetables. (Home economics series no. 10.)

Texas. University of Texas, Austin. School of domestic economy. Cleanliness and health. By Jessie P. Rich.

——— ——— ——— Cooking of tough meats.

——— ——— ——— Food for children.

——— ——— ——— Meats. (Rural series no. 3.)

——— ——— ——— The potato. (Rural series no. 1.)

——— ——— ——— The principles of menu making. 1 and 2. By Anne Richardson.

——— ——— ——— The problem of the school lunch. 1 and 2. By Jessie P. Rich.

——— ——— ——— Seasonable fruits. (Rural series no. 2.)

——— ——— ——— The uses of foods and the proper balancing of the diet. By Jessie P. Rich.

Utah. Utah agricultural college, Logan. Labor saving devices in the household. By Alice Ravenhill.

Washington. Agricultural experiment station, Pullman. Butter making on the farm. (Bulletin 41.)

——— ——— Cleanliness and cold as applied to the dairy. (Bulletin 55.)

——— ——— How to make bread from soft-wheat flours. (Bulletin 47.)

——— ——— Preserving eggs. (Bulletin 54.)

——— ——— Sewage disposal for country homes. (Extension bulletin no. 5.)

West Virginia. College of agriculture, Morgantown. Extension department. Care and feeding of the sick in the home. 1915. (Circular 7.)

——— ——— ——— Food for the family. (Farm bulletin.)

——— ——— ——— Saving time and strength in housekeeping. 1915. (Circular 8.)

——— ——— ——— Simple desserts. 1915. (Circular 37.)

——— ——— ——— The use of left-overs in cookery. 1915. (Circular 40.)

Wisconsin. University of Wisconsin, Madison. Agricultural experiment station. Sewage disposal for country homes. (Circular of information 34.)

——— ——— **Extension service of the college of agriculture.** Canning fruits and vegetables. (Circular 88.)

——— ——— ——— Dry surplus fruits and vegetables. (Circular 86.)

——— ——— ——— Hints on what to eat during the war. (Circular 100.)

——— ——— ——— How to cook soy beans. (Circular 79.)

——— ——— ——— How to store vegetables for winter use. (Circular 92.)

——— ——— ——— How to use barley. (Circular 80.)

——— ——— ——— How to use other cereals. (Circular 105.)

——— ——— ——— New clothes at small cost. (Circular 91.)

——— ——— ——— Other kinds of bread. (Circular 89.)

——— ——— ——— Other ways to cook potatoes. (Circular 98.)

——— ——— ——— Preserving spring eggs for winter use. (Circular 74.)

——— ——— ——— What shall we eat on wheatless and meatless days. (Circular 106.)

——— ——— ——— What to feed children. (Circular 69.)

Wyoming. University of Wyoming (Agricultural college). Division of extension. The Wyoming farm bulletin. Published monthly.

2. MISCELLANEOUS.

American association for study and prevention of infant mortality, Baltimore, Md. The common cold. (Leaflet no. 2.) 40 cents per 100, postpaid; $1.75 per 500, postage extra; $3 per 1,000, postage extra; $2.75 per 1,000 lots of 5,000 or more.

American home economics association, Roland Park Branch, Baltimore, Md. Report of household aid committee. An experiment in domestic service. 25 cents.

——— Papers presented at administration section meeting, Lake Placid, N. Y., June, 1912, including reports of the committees, school lunch, laundry, uniform accounting for institutions; papers on practice field for students; diet kitchens, etc. 50 cents.

——— Portrait of Ellen H. Richards. 10 cents. $2, $3, $6, $8.

Journal of home economics, 1211 Cathedral street, Baltimore, Md. Reprints. 10 cents each unless otherwise stated.

Report of committee on personal hygiene. Ellen H. Richards, 1904.

Report of teaching-section conference, 1907.

Study of textiles. Nellie Crooks, 1908.

Standardizing the home. J. R. Commons, 1910.

A review of recent literature on domestic art. C. F. Langworthy, 1910.

Relation of biological chemistry to home economics. W. J. Gies, 1910.

Courses in bacteriology for home economics. H. W. Conn, 1910.

Teaching bacteriology to mothers. H. W. Hill, 1910.

Aspects of economics of importance in the household. David Kinley, 1911.

What courses in sociology, pure and applied, should be included in college departments of household science? G. E. Howard. Courses in sociology. C. A. Ellwood, 1911.

Household service as a labor problem. I. M. Rubinow, 1911.

The home and the machine. J. Lebowitz, 1911.

Control of insect pests in institution. E. P. Felt, 1911.

Uniform accounting for institutions. W. M. Cole, 1912.

State and municipal documents as sources of information on home economics. C. F. Langworthy, 1912.

A plea for the introduction of historical courses on the home into higher schools and colleges for young women. Willystine Goodsell, 1912.

A course in household economics. B. R. Andrews, 1913.

The visiting housekeeper (4 papers). M. Adelaide Nutting, Ellen H. Richards, Frances Stern, Emma Winslow, 1915. 15 cents.

Indoor humidity. I. R. Ingersoll, 1915.

Recent contribution to the foundations of dietetics. Ruth Wheeler, 1915.

An application of statistics to budget making for lunch rooms. Roxana H. Vivian, 1916.

Standardization of temperatures for cooking batters and doughs. Louise Stanley *and* May Wallace, 1916.

Public health in the past and in the future. C. E. A. Winslow, 1916.

Recent work on normal adult nutrition. Katherine Blunt, 1916.

The highest education for women. Julia Lathrop, 1916.

Index for Journal, vol. 8, 1916.

The teacher and community wellbeing. G. H. Von Tungeln, 1916.

Part time education in household arts. Cleo Murtland, 1917.

The new dietetic treatment of diabetes mellitus. Lenna F. Cooper, 1917.

The development of home economics. Isabel Bevier, 1917.

Recent advances in our knowledge of digestion and absorption. Louise Stanley, 1917.

College residence halls. Edmund J. James, 1917.

A comparison of digestibility of starch in typical batter and dough mixtures. Amy L. Daniels *and* Leola Stricker, 1917.

Report of the committee on correlation of chemistry and home economics in high schools, 1917.

Practice houses for students in home economics. Isabel Ely Lord, 1917.

A suggestion in regard to the preparation and use of caramel. G. P. Plaisance *and* Helen Monsch, 1917.

Equipping a diet kitchen. Ruth McNary Smith, 1917.

Some administrative problems in home economics in the public schools. Henrietta Calvin, 1917.

The school lunch as a project in teaching cookery in the elementary schools. Essie Heyle, 1917.

Losses of iron in cooking vegetables. Katherine Blunt *and* Florence Otis, 1917.

Club programs in home economics. Helen L. Johnson, 1917.

A home with an income. Annette Harvey, 1917.

Old methods and new condtions (drying and canning). Jessie Hurd, 1917.

The college course in home economics. Elisabeth Jenkins, 1917.

The housewife and the fish problem. Henry B. Ward, 1917.

Why the large calorie? Frederick A. Osborn, 1917.

Sanitary surveys of institutions. C. E. A Winslow, 1917.

Studies of labor problems in household employment. Henrietta Roelofs, 1917.

The American papaw and its food value. C. F. Langworthy *and* A. D. Holmes, 1917.

The home guard. Flora Orr, 1917. 5 cents.

Recent contributions to our knowledge of food preparation. Louise Stanley, 1917.

Index for Journal, vol. 9, 1917.

Some recent magazine articles on the standard of living. Lorinda Perry, 1918. 20 cents.

Increase in living costs. Helen Coombs *and* Elizabeth Bishop, 1918. 15 cents.

A cheap homemade soybean meal for diabetics. Lydia Roberts *and* Elizabeth Miller, 1918.

Dietary study at Vassar College. Annie MacLeod *and* Mary Griggs, 1918.

The work of the dietitian in the Canadian military hospitals. .Violet Ryley, 1918.

A study of the cost of living of working class families in Roxbury, Mass. Sara H. Stites, 1918. 15 cents.

What to teach the public regarding food values. F. V. McCollum, 1918.

A quick method of calculating food value. Caroline L. Hunt, 1918.

Learning the lesson of food conservation. Sarah L. Arnold, 1918.

Teaching food values. C. F. Langworthy, 1919. Utilization of some nuts as food. F. A. Cajori, 1918.

A consideration of the canning problem. Elizabeth Genung, 1918.

Home project work in vocational home economics in secondary schools. Maude G. Adams, 1918.

Survey of agencies for the sale of cooked food. Helen Atwater, 1918.

Hampton normal and agricultural institute, Hampton, Va. Approved methods for home laundering. Vol. 6, no. 11.

——— Canning and preserving. Vol. 6, no. 3.

——— Community clubs for women and girls. Vol. 6, no. 8.

——— Domestic arts at Hampton institute. Vol. 3, no. 3.

——— Home makers' club. Vol. 7, no. 8.

——— The housefly a carrier of diseases. Vol. 5, no. 3.

——— Housekeeping and cooking lessons for rural communities. Vol. 6, no. 9.

——— Housekeeping and sanitation in rural schools. Vol. 6, no. 2.

——— Housekeeping rules. Vol. 2, no. 9.

——— Practical patriotic recipe. Vol. 14, no. 1.

——— Rural school lunches. Vol. 7, no. 9.

——— Sewing for rural schools. Vol. 7, no. 7.

These publications are free in lots of 12 to Southern teachers; 50 cents per dozen to others. Single copies, 5 cents.

Health-education league, Boston, Mass. Booklets for social service: No. 1. Hints for health in hot weather. 3 cents each, $2 per hundred. No. 2. Milk. 4 cents each, $3.25 per hundred. No. 3. "Colds" and their prevention. 4 cents each, $3.25 per hundred. No. 4. Meat and drink. 4 cents each, $3.25 per hundred. No. 5. Healthful homes. 5 cents each. $4 per hundred. No. 6. The successful woman. 4 cents each, $3.25 per hundred. No. 7. The boy and the cigarette. 5 cents each, $4 per hundred. No. 8. The care of little children. 5 cents each. $3.75 per hundred. The plague of mosquitoes and flies. 5 cents each, $5.25 per hundred. No. 11. Tonics and stimulants. 3 cents each, $2 per hundred. No. 12. Emergencies. 10 cents each, $8 per hundred. No. 13. Microbes, good and bad. 5 cents each, $4 per hundred. No. 15. The efficient worker. 5 cents each, $3.75 per hundred. No. 16. Sexual hygiene. 5 cents each, $3.75 per hundred. No. 17. Health in labor camps. 4 cents each, $3 per hundred. No. 18. Tuberculosis (consumption). 6 cents each, $4.25 per hundred. No. 19. When to call the physician. 4 cents each, $3.50 per hundred. No. 20. Habits of health. 5 cents each, $4.25 per hundred. No. 21. Wastes and their disposal. 6 cents each, $4.75 per hundred. No. 22. Typhoid fever, infection and prevention. 6 cents each, $4 per hundred. No. 23. The observance of health day in schools. 5 cents each. $3.25 per hundred. No. 24. Industrial hygiene. 8 cents each, $5.50 per hundred. No. 26. Hygiene of exercise. 5 cents each, $3.75 per hundred. No. 27. Nerve-waste. 8 cents each, $5 per hundred. No. 28. Health of the school child. 6 cents each, $4 per hundred. No. 29. Prospective motherhood. 8 cents each, $5 per hundred. No. 30. Cancer. 5 cents each, $4 per hundred. No. 31. Rheumatism. 8 cents each, $5 per hundred. No. 32. Helpful healthgrams. 2 cents each, $1.50 per hundred.

McKeever's home training bulletins. (Address: Prof. William McKeever, University of Kansas, Lawrence, Kans. Price 5 cents each; 3 cents in quantities.)

1. The cigarette smoking boy. 2. Teaching the boy to save. 3. Training the girl to help in the home. 4. Assisting the boy in the choice of a vocation 5. A better crop of boys and girls. 6. Training the boy to work. 7. Teaching the girl to save. 8. Instructing the young in regard to sex. 9. The boy's vacation employment. 10. Teaching the child to play.

National child welfare exhibition committee, 200 5th ave., New York city.

I. Bulletins (sample set, 25 cents, special price in quantities): 1. The history of the child welfare exhibition movement. 2. Organization of a child welfare exhibit. 3. The cost. 4. The construction. 5. The floor plan. 6. Twelve good screens and why. 7. Screen plans (for use in preparing wall exhibits). 8. Screen plans as filled out by exhibitors. 9. Publicity committee. 10. Organization of explainers. 11. The program (living exhibits, entertainments, motion pictures, etc.). 12. After the child welfare exhibit what? 13. Neighborhood child welfare exhibits.

II. Exhibits for loan: The committee loans the following exhibit sections, at $5 and transportation charges per section with reduced prices for larger quanities: Sex education and hygiene; Waste humanity (feeblemindedness); Children's diseases (2 sections); Medical inspection; The school building; Open air schools; Vocational education; The education of the immigrant; The dependent child; Children's institutions; The child's food; Play; Public recreation; Social centers; Boy scouts of America; Camp fire girls; Infant mortality and care of babies (3 units from Russell Sage foundation); School feeding (2 units from American home economics association); Psychological clinic of University of Pennsylvania (2 units).

New York city. Teachers college, Columbia university. Technical education bulletins:

No. 1. Economic function of women. By Edward T. Devine. 10 cents.

No. 2. Annotated list of books relating to household arts. 42 p. 15 cents.

No. 3. The feeding of young children. By Mary Swartz Rose. 10 cents.

No. 4. Hints on clothing. By Mary Schenck Woolman. 8 p. 10 cents.

No. 5. Quantitative aspects of nutrition. By Henry C. Sherman. 10 cents.

No. 7. The determination of cotton and linen by chemical and microscopic methods. By Prof. Herzog, of Prussian textile school, at Sorau. Translated by Ellen Beers McGowan. 25 cents.

No. 8. A syllabus of household management. By Mary Louise Furst. 10 cents.

No. 9. The girl of to-morrow—what the school will do for her. By Benjamin R. Andrews. 10 cents.

No. 13. A dietary study in a children's hospital. By Mary Swartz Rose *and* Harriet C. Jacobson. 10 cents.

No. 18. Canned foods: fruits and vegetables. By Florence R. Corbett. 10 cents.

No. 19. Physical and chemical tests for the housewife By Sadie B. Vanderbilt. 10 cents.

No. 20. Address list for illustrative materials and laboratory supplies for instruction in household arts. 10 cents.

No. 22. Some attempts to standardize oven temperatures for cookery processes. By May B. Van Arsdale. 10 cents.

No. 23. Food for school boys and girls. By Mary Swartz Rose, Teachers college. 16 p. 10 cents.

No. 24. A year's work in industrial arts, third grade, Speyer school. 22 p. 15 cents.

No. 25. Annotated list of books relating to household arts. 25 cents.

No 26. A survey of your household finances. By Benjamin R. Andrews. 16 p. 10 cents.

No. 27. Some food facts. By Mary Swartz Rose. 8 p. 5 cents.

No. 28. History of cookery. By Barrows, Shapleigh *and* Blitz. 36 p. 25 cents.

No. 29. Tentative course of study in household arts, seventh and eighth grades, Speyer school. 32 p. 20 cents.

No. 30. Economical diet and cookery in time of emergency. Profs. Rose *and* Winchell *and* Miss Shapleigh, Teachers college. 12 p. 15 cents.

Mathematics for nurses. 32 p. 25 cents.

No. 31. Simple lessons on the physical care of the baby. By Josephine Hemenway Kenyon. 20 cents.

No. 32. Lessons in home nursing. By Prof. Isabel M. Stewart, Teachers college. 12 p. 15 cents.

No. 33. How to plan meals in time of war, with economical menus and directions for marketing. By Prof. Mary Swartz Rose, Teachers college. 16 p. 20 cents.

No. 34. Ninety tested, palatable and economical recipes for the housewife. By Prof. May B. VanArsdale, Teachers College. 20 p. 30 cents.

No. 35. Some sugar-saving sweets for every day. By Prof. May B. VanArsdale *and* Miss Day Monroe. 20 p. 20 cents.

No. 36. Tested international recipes. By Prof. May B. VanArsdale *and* Day Monroe. 21 p. 20 cents.

No. 37. Corn calories for conservation. Recipes and menus for week. 25 cents.

No. 38. War breads. Prepared by school of practical arts, Teachers college. 5 cents.

III. SYLLABUSES AND CIRCULARS (STATE AND CITY DEPARTMENTS OF EDUCATION, ASSOCIATIONS, AND SCHOOLS).

[Syllabuses and descriptive circulars giving courses of study outlined for the schools of a State or city are being issued in increasing numbers. Some of these have proved their value in the past. Many of the older ones are now obsolete. A study of those listed reveals something of the changes through which the home economics education has been passing.]

Alabama. Alabama girls' technical institute. Outline of domestic art work for the high school. Montavello, Ala., January, 1915. 34 p. (Bulletin no. 31.)

American home economics association, 1211 Cathedral street, Baltimore, Md. Syllabus of home economics. 1913. 69 p. Paper, 50 cents; cloth, $1.

Birmingham. Board of education. Courses of study and regulations for high schools, 1918–1919.

California. University of California, Berkeley. Syllabus of a one-year course in general and household chemistry for the high school. Compiled by Alphanu honor society of the Department of household science. 1917.

——— ——— Syllabus of cooking. (To be issued.)

Colorado. Denver. Board of education. Course of study. Fine and industrial arts. Grades 1 to 8 inclusive.

——— ——— ——— The manual training high-school courses of study. Rev., 1912.

Connecticut. Department of education, Waterbury. Simple lessons in foods, cookery, and table service. 1917. 64 p. (Domestic science. Book 1.)

Cooley, Anna M., *and others.* Home economics studies in grades 7 to 12. Teachers college record, March, May, and September, 1918.

England. London county council. Syllabus of instruction in domestic economy. London, 1912. Rev., March, 1912.

Georgia. Department of education, Atlanta. Suggestions for teaching household arts and agriculture. 1913.

Illinois. Chicago. Board of education. Department of household arts. A course of study for high schools. Chicago, 1912. 26 p. (Out of print.)

——— ——— ——— **Household arts, outlines for the elementary grades. Sewing. Cooking.**

——— **State normal university, Normal, Ill.** Home economics. Normal, Ill., Illinois State normal university, 1910. 24 p. (Normal school quarterly, series 8, no. 34, January, 1910.)

——— **University of Illinois, Urbana.** Outlines of domestic science and art for elementary schools of Illinois. Urbana, University of Illinois, 1915. 16 p. 10 cents.

——— ——— Syllabus of domestic science and domestic art for the high schools of Illinois. Rev. ed. Urbana, Ill., University of Illinois, 1914. 25 cents.

——— **Western state normal school, Macomb.** Course of study for domestic science and art in the grades. March, 1916.

Indiana. State department of public instruction, Indianapolis. Domestic science. State course of study for the public schools of Indiana. p. 126. (Bulletin no. 20, September, 1915.)

——— ——— Home economics. State course of study for elementary and secondary schools of Indiana. 44 p. (Bulletin no. 29, 1917.)

——— ——— Home making. Lessons for the seventh and eighth grades in the rural schools of Indiana. (Bulletin no. 31, 1917–18.)

September bulletin—Food preservation; October bulletin—Making use of our food supply; November bulletin—Table service; December bulletin—The gift season; January bulletin—Problems in hand sewing; February bulletin, 1918—Home sewing (War emergency notes); March bulletin—The farm house (War emergency notes); April bulletin—Hospitality (War emergency notes); September bulletin—Care of the family in health (War emergency notes); October bulletin—Care of the family in sickness (War emergency notes); November bulletin—Selection of Clothing (War emergency notes); December bulletin—House decoration; January bulletin 1919—House furnishing; February bulletin—Care of the house; March bulletin—Home management; April Bulletin—How to live.

——— ——— The training and certification of teachers for agricultural, industrial, and household arts subjects in the public schools of Indiana. Indianapolis, Ind., 1914. 36 p.

Iowa. Department of public instruction, Des Moines. Outlines in home economics. One-half year course. 1915. 95 p.

——— ——— Normal training course in four-year accredited high schools. Des Moines, 1913. 179 p.

——— **Sioux city graded schools. Domestic science department.** Eighth grade.

Kansas. State department of education, Topeka. Manual for the normal and industrial training courses in Kansas high schools. 1914.

——— ——— Course of study for high schools. Part IX. Industrial subjects. 1917. 53 p.

——— ——— Course of study for rural and graded schools. 1917. 262 p.

——— **State manual training normal school, Pittsburg. Department of household arts and sciences.** Bulletin, 1914.

ondon, England. Board of education. Interim memorandum on the teaching of housecraft in girls' secondary schools. 1911. 71 p. 4 pence.

Louisiana. State university, Baton Rouge. Home economics, public schools of Louisiana. (Bulletin, v. 5, n. s., no. 9. Part 1. September, 1914.)

Maine. Educational department. Household science. 19 p. (Courses of study for elementary schools no. 4.)

—— —— Outline of courses in domestic arts in the state normal schools. By A. O. Thomas.

Massachusetts. Board of education. Household arts. Teachers' manual and course of study for grades 7 to 10, inclusive. 1916. (Bulletin no. 29. Whole number 78.)

—— Brookline high school. Courses in domestic science. 1912.

—— Springfield. Course of study in sewing for grades V and VI, and junior high school, II and III. Course of study in domestic science junior I. Course of study in domestic science junior III. Parallel course in home furnishing girls junior IV. Outline of work in millinery junior I. Laundry lessons. Mimeographed.

Michigan. Detroit public schools. Recipes for instruction in domestic science. 1915.

Minnesota. Department of education. Industrial course for consolidated schools of Minnesota. St. Paul, Minn., 1917. 116 p. (Bulletin no. 42.)

Mississippi. Industrial institute and college, Columbus. Bulletin, January, 1916—Outline of the extension work. Bulletin, March, 1916—Millinery department.

Missouri. Kansas city public schools. Clothing and textiles, Elementary schools. 1916.

—— —— Lessons in domestic science for the elementary schools. First year course, 1916. Second year course, 1917.

—— St. Louis public schools. Course of study in cookery for elementary schools. October, 1917. 78 p.

Nebraska. Department of public instruction. Domestic science. Crete plan. Lincoln, Nebr., 1911. 24 p.

New Hampshire. Department of public instruction. Industrial education in New Hampshire. Reprint from report of superintendent of public instruction, 1912. 31 p. 6 pl.

—— —— Standard program of studies for the secondary schools. 2d ed. Concord, N. H., 1912. p. 243.

—— —— Division of institutes circulars. Cooking as means and end in education. 1913–14.

—— —— —— Dietetics. Part 1. Feeding the sick. 1915–16. Part 2. Feeding the well. 1916–17.

—— —— —— Domestic arts courses in high schools of the usual four-year type. 1916–17.

—— —— —— Household appliances. 1914–15.

—— —— —— Meat: Methods of cooking. 1915–16.

—— —— —— Rational methods in teaching cooking. 1915–16.

—— —— —— Suggestions to domestic arts teachers; starting the first course in cooking. 1914–15.

—— —— —— Tomato project for domestic arts classes.

New Jersey. State normal and model schools. Recipes used by departments of domestic science. Trenton, 1917.

New Mexico. State department of industrial education. Course of study in industrial education including domestic science, manual training, and agriculture for the schools of New Mexico. Prepared by Manette E. Myers, State director of industrial education. Santa Fe, February, 1913. 51 p.

——— Annual report of the State director of industrial education. 1915.

New York city. Columbia university. Teachers college. Curriculum of Horace Mann elementary school. 1917.

——— ——— Curriculum of Speyer school. 60 cents, to cover cost and postage.

——— ——— Tentative course of study in household arts for the seventh and eighth grades, Speyer school. 1914–15. (Technical education. Bulletin no. 29.) 20 cents.

——— **Department of education.** Course of study and syllabuses in home economics and sewing for the elementary schools of the city of New York, 1915.

——— ——— Syllabuses for high schools. 1911.

——— **University of the State of New York, Albany. Elementary syllabus.** Manual and household arts. Agriculture. 1910. 255 p.

——— ——— Syllabus for secondary schools. 1918. Home economics.

——— ——— Vocational training for girls in the State of New York. By Anna G. Hedges. 1915. 41 p.

North Dakota. High schools. Syllabi for two units in domestic science and art in North Dakota. Submitted to the State high school board, May 18, 1912.

Ohio. Columbus public schools. Home economics course: Elementary school, intermediate school, and high school.

——— **Dayton public schools.** Course of study in home economics for the elementary and high school. 1916.

Oklahoma. State superintendent of public instruction. Agriculture and home economics, bulletin with a moral code. Supplement. 1917.

Oregon. Department of education, Salem. Course of study for the high schools of Oregon. 1915. 112 p.

——— **Oregon agricultural college. School of domestic science and art.** A suggestive course of study in sewing for the elementary and secondary schools of Oregon and a suggestive two-year course of study in domestic art for the high schools of Oregon. By Helen H. Tobin *and* Ariel M. Ewing. (Bulletin series 1, no. 58.) Out of print.

Pennsylvania. Altoona high school. Book of recipes for the domestic science department. By Zitella Wertz. 1913. 85 p.

——— **Department of public instruction. Bureau of vocational education, Harrisburg.** Cooking and sewing, sixth, seventh and eighth grades.

——— ——— ——— Suggestive outline. Food study-production, transportation, distributing, and marketing.

——— **Philadelphia, Pa. Board of public education.** Domestic art. Grades five to eight. Outline for the use of teachers. September, 1918.

——— ——— Domestic science. Grades seven and eight. Outlines for the use of teachers. September, 1918.

Philippine Islands. Bureau of education. Housekeeping. A textbook for girls in the public intermediate schools of the Philippines. By Alice M. Fuller. Philippine Islands, Manila, Bureau of printing, 1914. 298 p. 59 illus.

——— ——— Housekeeping and household arts. A manual for work with the girls in the elementary schools of the Philippine Islands. By Alice M. Fuller. Philippine Islands, Manila, Bureau of printing, 1911. 178 p. 16 pl. (Bulletin no. 35.)

——— ——— Lace making and embroidery. Philippine Islands, Manila, Bureau of printing, 1911. (Bulletin no. 34.)

——— ——— Primary and intermediate sewing. A manual for use in Philippin public schools and normal institutes. Philippine Islands, Manila, Bureau of printing, 1917. 93 p. (Bulletin no. 53. Rev., 1917.)

Porto Rico. Department of education. The course of study for the first year in home economics to be used by the teachers in the elementary schools of the island of Porto Rico. San Juan, P. R., Published by the Department of education, 1914.

——— ——— Home making and home keeping, a textbook for the first two years in home economics in the public schools of Porto Rico. By Grace J. Ferguson. San Juan, Published by Department of education, 1915. 278 p.

Tennessee. Shelby county. Outlines of course of study in home making for elementary and high schools of Shelby county. 1916.

——— **University of Tennessee.** A brief course in domestic science for state institutes of Tennessee. Arranged by Catherine A. Mulligan. Knoxville, 1913. 54 p. (Out of print.)

Texas. University of Texas. Domestic economy in the schools. Syllabus of domestic economy for elementary and secondary schools of Texas. April, 1914. 69 p. (Bulletin. Official series, no. 98.)

United States. Department of the interior. Office of Indian affairs. Outline lessons in housekeeping, including cooking, laundering, dairying, and nursing, for use in Indian schools. Washington, Government printing office, 1911. 23 p. illus. 5 cents.

——— ——— ——— Some things that every boy should know how to do and hence should learn to do in school. Washington, Government printing office, 1911. 48 p. illus. 15 cents.

——— ——— ——— Some things that girls should know how to do and hence should learn how to do when in school. Washington, Government printing office, 1911. 23 p. 5 cents.

——— ——— ——— Synopsis of course in sewing. Washington, Government printing office, 1911. 88 p. 10 cents.

——— ——— ——— Teaching rudiments of cooking in classroom; primary methods and outlines for use of teachers in Indian schools. Washington, Government printing office, 1906. 62 p. 10 cents.

Virginia. Hampton normal and agricultural institute. Cooking course no. 1 and no. 2. Hampton, Va., 1915. No. 1, 40 p. No. 2, 44 p. 25 cents each.

——— **John F. Slater fund.** Suggested course for county training schools. 1917. 78 p. (Occasional papers no. 18.)

Washington. Department of education. Domestic education. Prepared by F. F. Nalder, deputy state superintendent of public instruction. Olympia, Wash., 1914. p. 143–48. (High school manual, 1914.)

Wisconsin. State department of education. Manual of the free high schools of Wisconsin. 7th ed. rev. C. P. Carey, State superintendent of education. Madison, 1914. 208 p. *See* p. 13–14, 160–168.

——— ——— Suggestive outline of work on food conservation for home economics teachers. Madison, 1918.

——— ——— Suggestions and requirements for teaching of agriculture, manual training, cooking and sewing in state graded schools. C. P. Carey, State superintendent. Madison, 1914. 48 p.

——— ——— Suggestions for teaching cooking and sewing in the country schools of Wisconsin. C. P. Carey, State superintendent. 16 p.

Wyoming. University of Wyoming. Tentative course in home economics for elementary and high schools. Laramie, 1918. 88 p.

IV. CHARTS FOR REFERENCE STUDY.

[Illustrative charts for food study or for other phases of home economics work have been issued from time to time and many of them offer much that is helpful. The list given is comparatively brief and some of the earlier charts are not now available. Many institutions prepare charts for their own use which are not available for distribution.]

American meat cutting charts. Beef—veal—pork—lamb. New York, E. C. Bridgeman, 86 Warren St.

Set of 4 charts; full mounted; map style. Size 8 feet 6 inches, by 2 feet 4 inches. $10. Also small ones for students and housekeepers, in black only. 20 cents per set.

Association for improving the condition of the poor, New York city. Food charts. New York, Association for improving the condition of the poor, 105 East 22d st.

Set of 9 (22x28 in.) including book, "The adequacy and economy of some city dietaries." Prepaid, $2.50. Photographic set 5x7 in. (for carrying), $1.

Baldt, Laura I. Sewing and dressmaking charts. Selected from "Clothing for women." Philadelphia, Lippincott, 1917.

Fifteen in a set. Each chart 28x42 inches; $12.50 net per set.

Better babies bureau, New York. Better babies health charts. New York. Woman's home companion, 381 Fourth ave.

Bigelow, Florence I. Educational housefurnishing charts. St. Paul, Minn., Webb publishing company.

A series of 5 charts to teach good taste in housefurnishing. Price per set of 5 charts, 30 cents. Price per chart separately, 6 cents. Postage extra.

——— Good and appropriate dressing. St. Paul, Minn., Webb publishing co.

A series of 5 charts; to teach dress, color, and harmony. Price per set of 5 charts, 30 cents. Price per chart separately, 6 cents.

Brussels charts. Beef, calf, and lamb. Boston, Whitcomb & Barrows. $2 per set.

Cards illustrating tea, coffee, cinnamon, vanilla, black pepper, nutmeg, clove. Chicago, Ill., A. W. Mumford.

Child health organization, 156 Fifth avenue, New York city. Child health literature.

Columbia university. Teachers college. Educational museum. Meat charts and photographs.

Set of 6 photographs; cuts of beef (9 x 4), $1. Set of four photographs, showing whole beef animal and sides of beef (5½ x 4), 40 cents. Chart showing hind quarters of beef (mounted) with rollers, $2.

Consumer's league, 6 East 39th street, New York city.

Flour exhibit. Charts. 1. Simplified flour mill model; 2. A kernel of wheat. Minneapolis, Minn., Washburn-Crosby co. $3.50.

Goldsbury, P. W. Register of foods. Boston, Mass., Whitcomb & Barrows. $1.

Health charts.

On thin durable white paper of good quality, 22 x 28 inches. Individual charts, 25 cents each. Set of 57 charts, $5 plus 50 cents for packing. Illustrated health chart report, 10 cents, $5 per hundred. Charts and reports can be obtained from Dr. Thomas D. Wood, 525 West 120th st., New York city, and American medical association (press), 535 North Dearborn street, Chicago, Ill.

Lawrie, H. N. The balanced ration chart. The Atwater standard ration, 3 charts and descriptive text. Portland, Ore., Ivy press. 1918.

Model food exhibit of every-day articles of diet. Plastic imitations of foods. New York city, Plastic art novelty and specialty co., inc., 1495 Third avenue.

Price per set complete, $75 f. o. b. New York. Send for price list of parts. Meat and fish portions equal to one quart of milk, $12.50. Imitation food for child feeding, $16.50.

Murphy, Ruth M. Celluloid meat charts. (In color.) Boston, Whitcomb & Barrows.

A set of 5 charts; each 8 x 10 inches; beef, New York and Philadelphia; beef, New England; mutton; pork; veal. Net $1.60.

National child welfare association. Parcel post exhibits. Healthy babies and healthy children charts. New York, National child welfare exhibit co., 70 Fifth ave.

Thirteen baby week panels, $15.

Twelve healthy children panels, $14. Full set of 25, $25.

The prevention of tuberculosis in childhood. Complete set of 10 lithographed panels, post paid $8.

Prenatal care for saving mothers' and babies' lives. Complete set of 10 lithographed panels, postpaid, $8.

Early habit forming; Growth through play; Growth through study; Growth through work; The child and his vocation; The child and city planning; The child and the rural community; Prevention of want and crime.

Each of the above, of 5 posters each, $5.

Alcohol and childhood. 10 posters, $8.

National child welfare exhibit association. The baby book. A reproduction in miniature of the National child welfare exhibit panels. 1916. 31 p. 25 cents.

——— Childhood and health. Containing 13 full-page illustrations of the Healthy babies exhibit, and as many pages of explanatory text with bibliography. 1917. 31 p. 25 cents.

——— The physical care of babies and children. A lecture for use with the exhibit panels on Healthy babies and children.

——— Teaching health through the use of graphic materials.

Natural science collections. St. Louis, Mo., Southard & O'Meara, 2117 Olive st.

Nature pictures. Chicago, Ill., A. W. Mumford, 536 South Clark st.

Plants and flowers, fruits, fish, etc., 2 cents each. Postpaid. $1.80 per hundred. Industrial pictures, 10 cents each.

Pratt institute. Charts representing cuts of meats, $10; per set of 4, $3 each. Bottles representing composition of common foods, $15 per set. Bottles representing compositions of the body, $15 per set. Blocks and bottles together, $28.

No longer available.

Simmons college. Food charts showing the comparative fuel value of common foods in relation to their cost. Boston, Mass., Simmons college.

Set of 6 wall charts, $1.50; housekeeper's set, 8½ x 23, 8 cents apiece in quantities of a hundred. 10 cents apiece, single.

Standard industrial and commercial exhibits. Explaining all the great industries, worked out from the raw materials to the finished products. New York, Educational exhibits co., 258 Broadway.

Stewart, Mary. Meat and chicken. (Hand painted charts.) West Chester, Pa., 26 West Union st., 1906.

$10 per dozen. $1 each. Chicken, $1.50. Also fruit, vegetables, and wheat.

Taber's dietetic charts. Four charts 35" by 46" $12.50. Chicago, Ill. Taber's chart and record company. 1722 Republic building.

United States. Department of agriculture. Food charts. Composition of food materials. Washington, Government printing office.

In color. 15 in a set. $1 per set; not sold singly.

Visual education. Teacher's guide to Keystone "600" set. Meadville, Pa., Keystone view company, educational department, 1918. 715 p. $1.

Keystone "600 set" of educational lantern slides.

Wilson & Co. Packers and provisioners, Chicago, Ill. Meat chart showing beef cuts. Distributed free of charge.

V. PERIODICALS.

[There are but few magazines dealing exclusively with home economics subjects. However, many magazines that treat of industrial, social, scientific, and economic questions are a necessary part of the home economics library. During recent months magazines have so generally treated the problems of the cost of living that the list offered cannot be regarded as exhaustive, but an attempt has been made to name magazines that generally include subjects of interest to the housewife and the student of home economics in their work. Several of the magazines listed are narrowly technical. These will be of value to the student of clothing, foods, the home, the house or institutional housekeeping as the case may be.]

American club woman and modern housewife. Published monthly. American club woman publishing co., New York city. $1.50 a year.

American cookery (formerly Boston cooking school magazine). Published monthly. Boston cooking school magazine co., Boston, Mass. $1 a year.

American food journal. Published monthly. American food journal, Chicago, Ill. $2.50 a year. Single copies 25 cents.

American journal of public health. Published monthly. American journal of public health, Boston, Mass. $4 a year.

American motherhood. Published monthly. Arthur H. Crist co., Cooperstown, N. Y. $1.25 a year.

Child. Published monthly. London. American agents, G. E. Stechert & co., 151–155 West 25th st., New York city. 50 cents a copy.

Child welfare bulletin. Published monthly. Peoria, Ill. $1 a year. 10 cents a copy.

Child welfare magazine. (Official organ of Mothers' congress and parent-teacher associations.) Published monthly. Child-welfare co., 41 North Queen st., Lancaster, Pa. $1 a year.

Dry goods economist. Published weekly. Textile publishing co., New York city. $5. (Trade.)

Forecast. Pure food and home management. Published monthly, 6 East 39th st., New York city. $1 a year.

General federation magazine. Published monthly. Washington, D. C. $1 a year. Single issue 15 cents.

Good health. Published monthly. Good health publishing co., Battle Creek, Mich. $2.50 a year.

Good housekeeping. Published monthly. 119 W. 40th st., New York city. $1.50 a year. Single copies 15 cents.

House beautiful. Published monthly. House beautiful publishing co., 41 Mt. Vernon st., Boston, Mass. $2.50 a year. Single copies 25 cents.

Household arts review. (Domestic art review, 1908–1909.) Published three times yearly (November, February and May), November, 1908 to November, 1914. New York, Household arts club of Teachers college, Columbia university.

Industrial arts magazine. Published monthly. Bruce publishing co., Milwaukee, Wis. $1.50 a year.

Journal of biological chemistry. Published monthly. Rockefeller institute of medical research. $3 a year.

Journal of home economics. Published monthly. American home economics association. 1211 Cathedral st., Baltimore, Md. 500 p. a year, $2 a year.

Journal of physiology. Published at irregular intervals. Cambridge university press, London. 7 shillings a year. Subject to change.

Journal of the American medical association. Published weekly. 535 North Dearborn st., Chicago, Ill. $5 a year.

Manual training magazine. Published monthly except July and August. Manual arts press, Peoria, Ill. $1.25 a year.

Normal instructor and primary plans. Monthly. Owen publishing co., Danville, N. Y. $1.25 a year.

Pratt institute monthly. Published from November to June 1892–1904. Discontinued. (75 cents per year when published.)

Public health nurse. Published quarterly. National organization for public health nursing, 2419 Greenmount ave., Baltimore, Md. $1 a year.

School and society. Published weekly. Science press, Lancaster, Pa. $3 a year.*

School arts magazine. Published monthly, except July and August. Davis press, 25 Foster st., Worcester, Mass. $2 a year.

School science and mathematics. Published monthly. Smith & Turton, Chicago, Ill. $2.

Science. Published weekly. Science press, Lancaster, Pa. $5 a year.

Survey. A journal of constructive philanthropy. Published weekly. Survey associates, 112 East 19th st., New York city. $3 a year.

Table talk. Published monthly. Pierce publishing co., Cooperstown, N. Y. $1 a year.

Teachers college record. Published bi-monthly, except July. Bureau of publications, Teachers college, Columbia university, New York city. $1.50 a year.

Textile world journal. Published weekly. Bragdon, Lord & Nagle Co., New York city. $3. (Trade.)

Today's housewife. Published monthly. (Canton magazine co.) 461 Fourth ave., New York city. 75 cents a year. 10 cents a copy.

Woman's magazine. Published monthly. New idea co., 636–638 Broadway, New York city. $1 a year. 15 cents a copy.

VI. TEACHING.

[Home economics teachers have given careful thought to equipment for teaching and many schools have issued helpful information relating thereto in bulletins and circulars available to their graduates. Some textbooks also contain valuable suggestions for equipment. See Rose, Mary S., "Laboratory manual of dietetics," for the equipment of a dietetics laboratory, and Balderston, L. Ray, "Laundering" for laundry equipment. Houses selling equipment for cooking and sewing laboratories put out helpful catalogues.]

Columbia university. Teachers college. School of household arts. Address list of equipment and supplies for instruction in household arts. New York, Teachers college, 1914. 16 p. 10 cents. (Technical education. Bulletin no. 20.)

Kinne, Helen. Equipment for teaching domestic science . . . with a chapter on the school of household arts. Teachers college, Columbia university New York, Columbia university press, 1909. 96 p. illus.

Third edition, published by Whitcomb & Barrows, Boston, Mass., 1911, includes a chapter on portable equipment for lectures, by Anna Barrows. "This book contains 31 illustrations of model rooms and equipment for teaching domestic science, and 33 diagrams of floor plans, school kitchens, tables, cupboards, stoves, hot plates, etc." 80 cents.

1. HISTORY OF THE MOVEMENT.

[The history of home economics teaching is found chiefly in Government reports and other public records. In a few histories of education helpful references to the early beginnings of home economics education may be found. Accounts of the meetings of home economics organizations and methods of teaching that have become historical are included among those books which deal with the history to make clear the various phases in the development of the movement.]

Alabama home economics association. Proceedings. Second Annual conference. Montevallo, Ala., October, 1916. (Girls' technical institute. Bulletin 10, no. 2, n. s. no. 38.)

Alimentary hygiene and rational feeding. Second international congress, Brussels, October 4–8, 1910.

Arnold, Sarah Louise. The story of the Sargent industrial school at Beacon, N. Y. Boston, Merry Mount press, 1917. 77 p. (Simmons college, Boston.)

Bevier, Isabel, *and* **Usher, Susannah M.** The home economics movement. Part I. Boston, Whitcomb & Barrows, 1906. 67 p. 75 cents net.

Burstall, Sara A. Home economics. Domestic science and art for women and girls in American colleges and schools. *In her* Impressions of American education in 1908. London, New York (etc.), Longmans, Green & co., 1909. p. 199–219. $1.25.

California. **State board of education, Sacramento.** Report of the commissioner of industrial and vocational education. 1916.

Canada. **Ontario.** **Household science.** By Albert H. Leake. *In* Annual report of the Inspector of technical education. Ontario, 1907.

Clarke, Isaac E. Art and industry. Education in the industrial and fine arts in the United States. Part II. Industrial and manual training in public schools. Washington, Government printing office, 1892. (U. S. Bureau of education.)

Great Britain. **Board of education.** School training for the home duties of women. Presented to both houses of Parliament by command of His Majesty. London, Printed for H. M. Stationery office, by Wyman and sons, limited, 1905–07. 3 vols. illus. ([Parliament. Papers by command.] Cd. 2498, 2963, 3860.)

Vol 15. Part I contains "the teaching of 'domestic science' in the United States of America, by Alice Ravenhill: 1. State institutions. 2. Private institutions. 3. Social agencies for the promotion of domestic science teaching." 1905.

Vol. 16, Part II. Belgium, Sweden, Norway, Denmark, Switzerland, and France. 1906.

Vol. 17, Part III. Schools, public and private in the North of Europe. 1907.

Vol. 19, Part III. The Domestic training of girls in Germany and Austria. 1907.

——— **London.** **Board of education.** Interim memorandum on the teaching of housecraft in girls secondary school. 1911. 71 p. 4 pence.

Hecht, Charles E., *ed.* Rearing an imperial race. Containing a full report of the second Guildhall school conference on diet cookery and hygiene with dietaries; Special form H. M. Ambassadors abroad; Articles on Children's food requirements, clothing, etc. London, St. Catherine's press, 34 Norfolk st., Strand, 1913.

Hodson, F. Broad lines in science teaching. Chapter XIII. Domestic science. London, Christophers, 1909. 267 p. New York, Macmillan, 1910. 268 p. $1.50.

Household arts in education. *In* Cyclopedia of education, *ed.* by Paul Monroe. Vol. 3. New York, Macmillan co., 1911–13. p. 318–32. $25.
Bibliography: p. 331–32.

Hunt, Caroline L. The life of Ellen H. Richards. Boston, Whitcomb & Barrows, 1912. 328 p. $1.50. Conservation edition. 1918. 330 p. $1.25 net.

Jessup, Walter. The social factors affecting special supervision in the public schools of the United States. New York, Teachers college, Columbia university, 1911. $1.
Domestic science: p. 51–63.

Lake Placid conference on home economics. Proceedings, 1899–1901, $2; 1902, $1; 1903, $2; 1904, $2; 1905, $0.50; 1906, $1; 1907, $0.50; 1908, $0.50. Baltimore, Md., American home economics association, 1211 Cathedral st.

Morten, Honnor. Questions for women (and men). London, Adams & Charles Black, 1899. 123 p. Chap. VI. Cooks and cookery lectures.

National education association. Proceedings, 1887. Sewing and cooking, p. 204–5. Discussion, p. 225–37. Needlework in girls' schools, p. 545–49.

Puffer, Joseph A. Vocational guidance: the teacher as counselor. Chicago, Rand, 1913. 294 p. $1.25.
See chapter on Home making.

Putnam, Helen A. Report of the committee on the teaching of hygiene in the public schools. Part II. Domestic science and nature study. Easton, Pa., 1906. (American academy of medicine. Bulletin, April, 1906.)

Robinson, Solon. How to live. Saving and wasting. Domestic economy illustrated. New York, Fowler & Wells, 1873. 343 p.

Smyth, A. Watt. Physical deterioration. Its causes and the cure. Chapter XIII. The teaching of domestic subjects. London, John Murray, Albemarle st., W., 1904.

Talbot, Marion. The education of women. Chicago, University of Chicago press. 266 p. $1.25.

United States. Commission on national aid to vocational education. Vocational education. Report of the Commission on national aid to vocational education, together with the hearings on the subject. Washington, Government printing office, 1914. (63d Cong. 2d sess. House doc. 1004.)

——— **Department of agriculture. Office of experiment stations.** History and present status of instruction in cooking in the public schools of New York city. By Mrs. Louise E. Hogan. Washington, Government printing office, 1899. 10 cents. (Bulletin no. 56.)

——— **Department of labor.** Report of the Commissioner of labor. 1902. Trade and technical education in the United States and foreign countries.

United States. Department of the interior. Bureau of education. Art and industry. Industrial and high art education in the United States. By I. Edwards Clarke. Part 1.—Drawing in the public schools. Washington, 1885. cclix–842 p. Part 2.—Industrial and manual training in public schools. Washington, 1892. cxlviii, 1338 p. Part 3.—Industrial and technical training in voluntary associations and endowed institutions. Washington, 1897. liii, 1145 p. Part 4.—Industrial and technical training in schools of technology and in U. S. land-grant colleges. Washington, 1898. lvi, 1020 p.

——— ——— ——— Cooking schools. *In its* Industrial education in the United States. Washington, Government printing office, 1883. p. 276–99.

Contains: History of courses in Iowa and Illinois; Food museums; New York school of cookery, by Juliet Corson; Work by Miss Parloa; and Cooking schools in the South, by Helen Campbell.

——— ——— ——— Education for the home. *In* Report of the U. S. Commissioner of education, 1914. Chapter 13.

——— ——— ——— Education for the home. Part 1. Introductory survey and equipment for household arts. 10 cents. Washington, Government printing office, 1914. 10 cents. (Bulletin, 1914, no. 36.)

——— ——— ——— ——— Part 2. The states and education for the home; Rural schools; Elementary schools; High schools; Normal schools; Technical institutes; Various agencies and organizations. Washington, Government printing office, 1914. 30 cents. (Bulletin, 1914, no. 37.)

——— ——— ——— ——— Part 3. Colleges and universities. Washington, Government printing office, 1914. 25 cents. (Bulletin, 1914, no. 38.)

——— ——— ——— ——— Part 4. List of references on education for the home; cities and towns teaching household arts. Washington, Government printing office, 1914. 10 cents. (Bulletin, 1914, no. 39.)

——— ——— ——— Home economics. *In* Report of the U. S. Commissioner of education, 1915. Chapter 12. 1916. Chapter 16.

——— ——— ——— Report of American delegate to 3d International congress on home education, held in Brussels, August 21, 1910. *In* Report of the U. S. Commissioner of education, 1910. Vol. 1. p. 579–89.

——— ——— ——— A school for home makers. *In* Report of the U. S. Commissioner of education, 1911. Chapter 8.

——— ——— ——— Training schools of cookery. Washington, Government printing office, 1879. 49 p. 5 cents. (Circular of information, 1879, no. 4.)

——— **Federal board for vocational education.** Clothing for the family. Washington, Government printing office, 1919. 116 p. (Bulletin no. 23. Home economics series no. 1.)

——— Home economics education. Washington, Government printing office, 1919. 63 p. (Bulletin no. 28. Home economics series no. 2.) *See also* Annual report, 2d. 1918. p. 56.

Vocational studies. Domestic science. Compiled and published by Collins publicity service, Philadelphia, Pa.

Women's industrial council, London, 7 John street, Adelphi, Strand, W. C. Technical education for women and girls at home and abroad. London, 1909. 64 p. 2 pence by post.

Xenophon. The economist. *Trans. by* Wedderburn *and* Collingwood. *Ed.* by John Ruskin. London, 1876.

——— Economicus. H. A. Holden, *ed.* Macmillan. $1.25.

2. METHODS OF TEACHING.

[Books dealing with home economics teaching are still limited in number. The following list includes books which tell of different types of teaching and offer constructive suggestions for development of courses. Additional suggestions for courses of study and lesson plans may be found in some of the more complete textbooks.]

A. GENERAL.

Bonser, Frederick G. Fundamental values in industrial education. *In* Russell-Bonser. Industrial education. New York, Teachers college, 1913. 65 cents; paper 30 cents.

Boughton, Alice C. Household arts and school lunches. Cleveland education survey. New York, Russell Sage foundation, 1916. 170 p. 25 cents.

Condon, Randall J. The home school, an experiment in household education. *In* National education association. Proceedings, 1913. p. 184–189.

Cooley, Anna M. Domestic art in women's education; for use of those studying the method of teaching domestic art and its place in the school curriculum. New York, Scribner's sons, 1911. 274 p. $1.25.

——— *and others.* Home economics. Studies in grades seven to twelve. Teachers college record. March, May, and September, 1918.

Dean, Arthur D. Our schools in war time and after. Boston, Ginn & Co., 1918. 335 p. $1.10.

Dewey, John. School and society. Chicago, University of Chicago press, 1915. 164 p. $1.

Dopp, Katherine E. The place of industries in elementary education. Chicago. University of Chicago press, 1909. 260 p. $1.

Eliot, Charles W. Changes needed in American secondary education. New York, 1916. (General education board. Occasional papers no. 2.)

Ferris, Helen J. Girls' clubs. Their organization and management. A manual for workers. New York, Dutton & co., 1918. 383 p. Cloth $2 net.

Francke, Marie. Opportunities for women in domestic science. Ithaca, N. Y., Association of collegiate alumnae, 1916. 64 p. 80 cents.

Koos, Leonard V. The administration of secondary school units. Chicago, University of Chicago press, 1917. 194 p. $1. (Supplementary educational monograph, vol. 1, no. 3, July, 1917.)

Home economics and household arts. p. 127–41.

Leake, Albert H. Vocational education of girls and women. New York, Macmillan, 1918. 430 p. $1.60.

McKeever, William Arch. Industrial training for the girl. New York, Macmillan, 1914. 82 p. 50 cents.

——— Training the girl. New York, Macmillan, 1914. 342 p. $1.50.

Row, Robert K. The educational meaning of the manual arts and industries. Chicago, Row, Peterson & co., 1909. 248 p. $1.25.

Russell, James E. Industrial education. *See* Bonser, Frederick G. Fundamental values in industrial education.

Snedden, David. Problems of secondary education. New York, Houghton Mifflin co., 1917. 333 p. $1.50.

Chapter XXIII, To a supervisor of the teaching of home economics.

Trowbridge, Ada Wilson. The home school. Boston, Houghton Mifflin co., 1913. 97 p. 60 cents net.

United States. Department of the interior. Bureau of education. Home economics circulars and letters. Issued from time to time.

White, Eva W. Household arts. The Gary public schools. New York, General education board., 1918. 49 p. 10 cents.

Woolman, *Mrs.* Mary S. Home making in the vocational school, a plea. Hartford, Conn., Consumers' league of Connecticut, 1917. 12 p. 20 cents.

B. SPECIAL.

1. CORRESPONDENCE SCHOOLS.

[A list of the correspondence schools of home economics gives evidence of the growth of that form of education. It will be noted that comparatively few of these courses give college credit. The majority of them are for the benefit of the women in the home who do not have opportunity to enter college courses. Other colleges and normal schools offer courses from time to time. One desiring to enter upon correspondence study will do well to ascertain what courses are offered by her State institutions.]

American farmers' school. Correspondence office, Minneapolis, Minn. Domestic science course. $30 cash or $40 at $5 a month or $45 at $3 a month.

American school of home economics, 506 West 69th street, Chicago, Ill
Correspondence courses:
Regular complete course and "library," $49.
Food course and "library" of home economics, $27.
Housekeeping course and "library," $27.
Motherhood course and "library," $27.
Special course and "library" of home economics, $27.
Teachers' complete course and "library," $54.
Institution management complete course and "library," $54.
Dietitians' complete course and "library," $54.
Teachers' short course and "library," $31.50.
Institution management short course and "library," $31.50.
Nurse's course and "library," $31.50.
Dietitians' short course and "library," $31.50.
Demonstration agents' short course and special "library," $31.50.

California. University of California. Extension division. Course X1: Home millinery, non-credit, $5. Course X2: Essentials of sewing, non-credit, $5. Course X3: Dressmaking, non-credit, $5. Berkeley, Calif., University of California, 1919.

Missouri. University of Missouri. Extension division. Correspondence courses, home economics.

1a. Selection and preparation of food, 2, 3 or 5 hours credit. 10a. Household problems, 2 hours credit. 101a. House sanitation, 3 hours credit. 110b. House planning and furnishing, 2 hours credit. 125e. Principles of the preservation of food, 2 hours credit. Reading courses for women. Free outlines for clubs. Courses 1a, 10a, 101a, and 110b count with credit toward the A. B. degree.

Nebraska. University of Nebraska, Lincoln. Department of university extension. Correspondence courses. Food study 3A, 2 hours university credit.

Wisconsin. University of Wisconsin. Correspondence courses in home economics. 1917–18.

I. Informational courses: No. 1. Food study for the housekeeper. $4. No. 2. Planning the family dietary. $4. No. 3. Dietetics. $7. No. 4. The house and its equipment. $3. No. 5. Spending the income. $3. No. 6. Home nursing. $4. No 7. The prospective mother. $4. No. 8. The child in health. $4. No. 9. The child in disease $4. No. 10. Sewing. $4. No. 11. Study of fabrics. $4. No. 12. Muslin garments. $5. No. 13. Dressmaking and designing. $8. No 14 Infant's clothes. $3. No. 15. Home furnishing and decoration. $3.

II. College grade courses (General survey of home economics): No. 19. The house and its management. $12. (3 credits.) No. 20. Food and nutrition. $12. (3 credits.) No. 21. Applied design. $12. (3 credits.)

III. Courses for the rural school: No. 25. Cooking. $3. No. 26. Sewing. $3. No. 27A. Cooking and sewing. $3. No. 27B. Cooking and sewing. $3.

Woman's institute of domestic arts and sciences, Scranton, Pa. Correspondence courses. Dressmaking course. Complete millinery course. Complete sewing, dressmaking, and tailoring course, Cooking course. All non-credit courses.

2. KITCHEN GARDENS.

Colson, Elizabeth, *and* **Chittenden, Anna G.** The child housekeeper; simple lessons, with songs, stories and games. Music by Alice R. Baldwin. New York, 1903. illus. $1.

Huntington, Emily. How to teach kitchen garden or object lessons in household work, including songs, plays, exercises, and games illustrating household occupations. Garden city, N. Y., Doubleday, Page & co., 1901. 168 p. $3.

Keech, Mabel L. Training the little housekeeper by kitchen garden methods. Philadelphia, Lippincott, 1912. 77 p. illus. $1.

3. RURAL SCHOOLS.

(*See also* Rural School Lunch.)

Carney, Mabel. Country life and the country school: a study of the agencies of rural progress and of the social relationship of the school to the country community. Chicago, Row, Peterson & co., 1912. 405 p. $1.25.

Hamilton, John. Farmers' institutes for women. Washington, Government printing office. (U. S. Department of agriculture. Office of experiment stations. Circular 85.)

——— Form of organization for movable schools of agriculture. Washington, Government printing office, 1908. 8 p. (U. S. Department of agriculture. Office of experiment stations. Circular 79.) 5 cents.

——— History of farmers' institutes. Washington, Government printing office, 1906. (U. S. Department of agriculture. Office of experiment stations. Bulletin 174.) 15 cents.

Indiana. Department of public instruction. Home making bulletins. Lessons for the seventh and eighth grades in the rural schools of Indiana. Issued monthly. September, 1917, to April, 1918.

McKeever, William H. Farm boys and girls. New York, Macmillan, 1912. 326 p. $1.50.

Minnesota. Department of education. Industrial course for consolidated schools. *See* Syllabuses and Circulars.

National society for the scientific study of education. The rural school as a community center. 10th yearbook. 1911. Part II. Chicago, University of Chicago press, 1911.

United States. Department of agriculture. Boys' and girls' clubs. (Farmers' bulletin 385.)

——— ——— Farm home grounds. (Farmers' institute lectures nos 12 and 14.)

Syllabus of illustrated lectures, with lantern slides.

——— ——— Farmers' institutes for young people. Washington, Government printing office, 1910. 40 p. (Circular 99.) 5 cents.

——— ——— A first-year course in home economics for southern agricultural schools. By Louise Stanley. Washington, Government printing office, 1917. 58 p. 8°. (Bulletin 540. Professional paper, 1917.) 10 cents.

——— ——— Bureau of plant industry. Girls' demonstration work: The canning clubs. Washington, Government printing office, 1912.

——— ——— Office of experiment stations. County schools of agriculture and domestic economy in Wisconsin. By A. A. Johnson. Washington, Government printing office, 1911. (Bulletin 242.) 10 cents.

——— ——— ——— Educational contests in agriculture and home economics for use in farmers' institutes and agricultural extension work. Washington, Government printing office, 1913. 47 p. (Bulletin 255.) 5 cents.

——— ——— Office of the secretary. Needs of farm women. Reports Nos. 103, 104, 105, 106.

United States. Department of the interior. Bureau of Education. Teaching language through agriculture and domestic science. By M. A. Leiper. Washington, Government printing office, 1912. (Bulletin, 1912, no. 18.) 5 cents.

——— ——— ——— Three short courses in home making. By Carrie Alberta Lyford. Washington, Government printing office, 1917. (Bulletin, 1917, no. 23.) 15 cents.

4. VOCATIONAL MATHEMATICS FOR GIRLS.

Calfee, John E. Rural arithmetic. Boston, Ginn & co., 1913. 119 p. 30 cents.

Dooley, William H. Vocational mathematics for girls. Boston, D. C. Heath & co., 1917. 369 p. $1.28.

Farmer, A. N., *and* **Huntington, Janet R.** Food problems for the sixth, seventh and eighth grades. Boston, Ginn & co., 1918. 90 p. 27 cents.

Gardner, Mary, *and* **Murtland, Cleo.** Industrial arithmetic for girls grade schools. Boston, Heath, 1910. 150 p. 50 cents.

Hunt, Brenelle. Community arithmetic. For upper grades and junicr high schools. New York, American book co., 1916. 285 p. 60 cents.

Mellor, Theodora, *and* **Pearson, Helda, H.** Housecraft arithmetic. New York, Longmans, Green & co., 1916. 133 p. 60 cents.

Roray, Nelson L. Industrial arithmetic for girls. An elementary text in home economics. Philadelphia, P. Blakiston's son & co., 1917. 196 p.

VII. CLOTHING AND TEXTILES.

1. COSTUME DESIGN.

Audsley, G. A. Color harmony in dress. New York, McBride, Nast & co., 1912. 132 p. 75 cents.

Bolman, Lydia, *and* **McNutt, Kathleen.** Art in dress with notes on home decoration. Peoria, Manual arts press, 1916. 42 p. 35 cents.

Burbank, Emily. Woman as decoration. New York, Dodd, Mead & co., 1917. 326 p. $2.50.

Calthrop, Dion G. English costume. 4 vols. I. Early English; II. Middle Ages; III. Tudor and Stuart; IV. Georgian. London, Adam & Charles Black; New York, Macmillan, 1907. $6.

Challamel, Augustin. History of fashion in France. London, Low, 1882. $3.50.

DeGarmo, Charles. Aesthetic education. Syracuse, N. Y., C. D. Bardeen, 1913. 161 p. (Cornell study bulletin for teachers, no. 6.) $1.

Earle, Alice Morse. Two centuries of costume in America. MDCXX-MDCCCXX. New York, Macmillan co., 1903. New ed., 1910. 2 vols. in one. $2.50.

Farnesworth, Eva O. Art and the ethics of dress. San Francisco, Elder, 1915. $1.

Frazier, Cora B. Talks to women on essentials to success in the business world. Philadelphia, Palmer-Goodman co., 1913. 116 p. 50 cents.
Chapter 1, Dress and personal habits.

Gould, Grace M. Magic of dress. Garden city, N. Y., Doubleday, Page & co., 1911. $1.

Hammond, Edith C. Industrial drawing for girls: design principles applied to dress. New York, Redfield bros., 1912. 103 p. $1.50.

Hughes, T. Dress design. An account of costume for artists and dressmakers. New York, Macmillan, 1913. 232 p. $3.

Izor, Estelle Peel. Costume design and home planning. Boston, Atkinson Mentzer & co., 1916. 210 p. 90 cents.

Lawrence, Maude, *and* **Sheldon, Caroline.** Use of the plant in decorative design, for high schools. Chicago, Scott, Foresman & co., 1912. 149 p. $1.25. Pupils' edition, 68 p. 50 cents. For grade schools, 127 p. $1.25. Pupils' edition, 51 p. 35 cents.

McClellan, Elizabeth. Historic dress in America. Philadelphia, G. W. Jacobs, 1904. 293 p. $10.

Quigley, Dorothy. What dress makes of us. New York, Dutton. 75 cents. $1.25.

Robida, Albert. Yester-year. Ten centuries of toilette. (From the French by Mrs. Cashel Hoey.) New York, Scribners, 1891. 264 p. $1.50.

Shaw, Henry. Dresses and decorations of the middle ages. 2 vols. London, 1843.

Stone, Melicent. Bankside book of costume for children. Akron, Ohio, Saalfield publishing co., 1915. 173 p. $1.

Traphagen, Ethel H. Costume design and illustration. New York, John Wiley & sons, 1918. 145 p. $2.50.

Uzanne, Louis. Fashion in Paris in the nineteenth century. New York, Scribner, 1898. $15.

Vanderpoel, *Mrs.* **Emily N.** Color problems. New York, Longmans, 1902. 134 p. $5.

Webb, Wilfred M. Heritage of dress: being notes on the history and evolution of clothes. London, Times book club, 1912. 299 p. 7s. 6d.

Whitney, Belle Armstrong. What to wear: a book for women. Battle Creek, Mich., Good health publishing co., 1916. 200 p. $2.

Winterburn, Florence M. Principles of correct dress. New York, Harpers, 1914. 245 p. $1.

2. DRESSMAKING.

Allington, Sara May. Practical sewing and dressmaking. Boston, Estes, 1913. 246 p. $1.50.

Allison, May. Dressmaking as a trade for women in Massachusetts. *See* Women in Industry.

Baldt, Laura I. Clothing for women. Selection, design, construction: a practical manual for school and homes. Philadelphia, J. B. Lippincott co., 1916. 454 p. $2.

Blackmore, B. L. A. B. C. of garment cutting, and making garments for every day needs. New York, Longmans Green & co., 1918. 222 p. 90 cents.

Broughton, *Mrs.* J. Practical dressmaking. New York, Macmillan co., 1896. 75 cents.

Brown, M. P. Dress cutting, drafting, and French pattern modeling. London. Constable & co., 1902. 2s.

Bryner, Edna. Dressmaking and millinery. Cleveland foundation. Survey committee, Russell Sage foundation, 1916. 133 p. 25 cents.

——— Garment trades, Cleveland foundation. Survey committee, Russell Sage foundation, 1916. 153 p. 25 cents.

Carens, Edith M. Dressmaking self-taught in 20 complete lessons. Jacksonville, Fla., E. M. Carens, 304 Clark bldg., 1911, $2.

Coates, Lydia T. American dressmaking step by step. New York, Pictorial review co., 1917. 254 p. $1.25.

"Excellent guide for the inexperienced. Well-organized manual of garment construction; illustrates numerous and clear; directions explicit. Contains chapters on sewing and dressmaking accessories; preparation of materials; measurements; patterns and alterations, finishing, darning and patching; cutting; fastenings and plain and ornamental stitches; construction; maternity, infants' and children's garments; tailoring."—Library bulletin, State college of Washington, Pullman, Wash.

Cooke, Jessie C., *and* Kidd, Harriet M. Dressmaking in the schools. New York, Longmans, Green & co., 1914. 148 p. $1.35.

Dressmaker. New York, Butterick publishing co. $1.

Fales, Jane. Textbook on dressmaking. A manual for schools and colleges. New York, Charles Scribner's sons, 1917. 508 p. $1.50.

Ford, *Mrs.* Jane. Home dressmaking; or, dressmaking made easy. New York, Cupples & Leon co., 1913. 110 p. 50 cents. Paper, 25 cents.

Hitching, Wilena, *and* Lutes, Della Thompson. Baby clothing, with patterns. New York, Frederick A. Stokes co., 1914. 108 p. $1.

Laughlin, Clara E. The complete dressmaker with simple directions for home millinery. New York, D. Appleton co., 1907. $1.25.

McManus, Blanche. (*Mrs.* **M. F. Mansfield.**) American woman abroad. New York, Dodd, Mead & co., 1911. 534 p. $2.

Chapter on men dressmakers of Paris and London.

Manning, Hazel. New clothes at small cost. Madison, Wis., University of Wisconsin, 1917. (College of agriculture. Extension service. Circular, 91, Sept. 1917.)

Murtland, Cleo, *and* Prosser, Charles A. Study of the dress and waist industry. *See* Women in Industry.

Reeve, Amy J. The elements of dress-pattern cutting, Magyar dress cutting, for technical classes, home workers, and professionals, as taught in the London county council technical schools, and in the colonies. New York, Longmans, Green & co., 1912. 30 p. 43 diagrs. 70 cents.

——— Practical dress cutting up-to-date for technical classes, home workers, and professionals as taught in the London county council technical schools, and in the colonies. New York, Longmans, Green & co., [1912]. 30 p., with diagrams.

Synge, Margaret B. Simple garments for children. New York, Longmans, 1913. 47 p. $1.25.

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Allen, Alfred H. Commercial organic analysis. Vol. 3. Part 1. Rev. and ed. by J. M. Matthews. Philadelphia, Blakiston, 1900. $5.

"Tannin, dyes and coloring matters. For the manufacturer and student. Reactions of many of the dyes are tabulated with formulas and derivations. Includes good descriptions of natural dyestuffs and common adulterants. At the end of each section are tables for the recognition of dyes on the fibers."—Library bulletin, State college of Washington, Pullman, Wash.

Brannt, William T. Dry cleaning, scouring, and dyeing. Philadelphia, Baird, 1907. 275 p. $2.50.

Fraps, George S. Principles of dyeing. New York, Macmillan, 1903. $1.60.

"Book aims to be 'a systematic presentation of the principles underlying the art of dyeing,' and includes a large number of laboratory experiments. To be used as a guide for the student in obtaining a general survey of the field and therefore does not pretend to be a manual of dyeing for the production of particular colors."—Library bulletin, State college of Washington, Pullman, Wash.

Hopkins, Albert A., *ed.* Scientific American cyclopedia of formulas. New York, Munn, 1910. 1077 p. $5.

Chapter 9, Dyeing formulas.

Hummel, John J. Coloring matters for dyeing textiles. Philadelphia, McKay, 1906. $1.

——— ——— The dyeing of textile fabrics. New York, Cassell, 1898. 480 p. $1.75.

——— ——— Textile fabrics and their preparation for dyeing. Philadelphia, McKay. $1.05.

Matthews, Joseph M. Laboratory manual of dyeing and textile chemistry. New York, John Wiley & sons, 1909. 363 p. $3.25.

Owen, F. A., *and* **Standage, H. C.** Dyeing and cleaning of textile fabrics. New York, John Wiley & sons, 1909. 253 p. $2.

Pellew, Charles E. Dyes and dyeing. New York, McBride, Nast & co., 1913. 264 p. $2.

Wahl, Andre. The manufacturer of organic dyestuffs. New York, Macmillan, 1914. 338 p. $1.60.

"Handbook for manufacturer and student on the chemistry of leading dyes of each class. Contains little on the application of dye-stuffs, but is excellent for textile student as it is well arranged and contains many references to the patents and original sources."—Pullman, Wash., library bulletin.

4. EMBROIDERY, KNITTING, ETC.

Corticelli lessons in crochet book. Florence, Mass., 1916. 48 p. 10 cents.

Day, Lewis F., *and* **Buckle, Mary.** Art in needlework. New York, Scribner, 1914. 274 p. $2.

Ellison, Nellie, *and* **Stoddard, Melvia M.** Corticelli lessons in tatting. Florence, Mass., Corticelli silk mills. 50 p. 10 cents.

Embroideries and their stitches. New York, Butterick publishing co., 1905. 112 p. 25 cents.

Goldenberg, Samuel L. Lace, its origin and history. New York, Brentano, 1904. $1.50.

Hall, Eliza, Calvert. (Obenchain, Eliza C.) Book of hand-woven coverlets. Boston, Little, Brown & co., 1914. 279 p. $2.

Klickmann, Flora, *ed.* Home art crochet book. New York, F. A. Stokes co., 1912. 117 p. 60 cents.

McKenna, Ethel, *ed.* Woman's library of needlework. New York, Dutton. 312 p. $1.50.

Nicoll, *Mrs.* **Maud Churchill.** Knitting and sewing. New York, George H Doran co., 1918. 207 p. $1.50.

Sharp, Mary. Point and pillow lace. New York, Dutton, 1905. 202 p. $2.

Tompkins, Ernest. The science of knitting. New York, John Wiley & sons, 1914. 330 p. $3.

Townsend, William G., *and* **Pesel, Louisa F.** Embroidery. New York, F. A. Stokes co., 1908. $1.60.

Tracy, Susan E. Rake knitting and its special adaptation to invalid workers. Boston, Whitcomb & Barrows, 1916. 35 p. 25 cents.

Webster, Marie D. Quilts. Their story and how to make them. Garden city, N. Y., Doubleday, Page & co., 1915. 178 p. $2.50 net; de luxe ed. $5 net.

Wilson, *Mrs.* **L. Barton,** *ed.* Corticelli home needlework. Florence, Mass., Monotuck silk co., 1898. 92 p. 10 cents.

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6. MILLINERY.

Bottomley, Julia. Practical millinery lessons. New York, Illustrated millinery co., 656 Broadway, 1914. 125 p. $1.25.

Hill, Clare. Millinery, theoretical and practical. Philadelphia, Lippincott & co. 75 cents.

La Salle, Mary, *and* **Wiley, Katherine.** Vocations for girls. Boston, Houghton Mifflin co., 1913. 139 p. 85 cents.

Laughlin, Clara E. The complete dressmaker with simple directions for home millinery. *See* Dressmaking.

Perry, Lorinda. Millinery as a trade for women. New York, Longmans, 1915. $1.50.

Reeve, Amy J. Practical home millinery. New York, Longmans, Green & co., 1903. 96 p. $1. 1912. 90 cents.

Tobey, Evelyn S. Hand-made flowers and how to make them. New York, Published by the author, 525 West 120th st., 1914. 19 p. 50 cents.

——— Millinery. Philadelphia, J. B. Lippincott co.

Van Kleeck, Mary. A seasonable industry. A study of the millinery trade in New York. New York, Russell sage foundation, 1917. 276 p. $1.50.

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Banner, B. Bertha. Household sewing, with home dressmaking. New York, Longmans, Green & co., 1898. 157 p. 90 cents.

Blair, Margaret. Industrial tablets for sewing. Minneapolis, Industrial education publishing co., 1909. 7 books each. 50 cents.

——— ——— New and practical course of graded sewing tests for public and private schools. St. Paul, Webb, 1911. 7 books each. 50 cents.

Burton, Ida R., *and* **Burton, Myron G.** School sewing based on home problems. Indianapolis, Vocational supply co., 1916. 393 p. $1.

Cornell, Louise Frances. A little sewing book for a little girl. Boston, Page co., 1918. 202 p. 85 cents.

Elrich, Olive M., *and* **Hunt, Hazel L.** Sewing efficiency: containing concise and definite instructions for better use of the sewing machine. New Haven, Conn., Greist manufacturing co., 1914. 70 p. 50 cents.

Flagg, Etta Proctor. Handbook of elementary sewing. Boston, Little, Brown and co., 1915. 72 p. 50 cents.

Foster, Oliver H. Sewing for little girls. New York, Duffield & co., 1911. 83 p. 75 cents.

Fuller, Mary E. Constructive sewing. A comprehensive course in sewing. Indianapolis, Ind., Industrial book and equipment co., 1916. Book 1. 91 p. 1917. Book 2. 83 p. 60 cents each.

Hapgood, Olive C. School needlework. New York, Ginn & co., 1893. 162 p. 50 cents. Teachers' ed., 252 p. 90 cents.

Hasluck, Paul N. Sewing machines: their construction, adjustment and repair. New York, Funk & Wagnalls co., 1905. 50 cents.

Hicks, Ada. Garment construction in schools. New York, Macmillan, 1914. $1.10.

Ingalls, ***Mrs.*** **Carrie C.** Textbook on domestic art. San Francisco, H. S. Crocker co., 1911. 232 p. $1.50.

James, T. M. Longmans' complete course of needlework, knitting and cutting-out. New York, Longmans, Green, and co., 1901. 452 p. illus. $2.

Jessup, ***Mrs.*** **Annie L.** Sewing book. New York, Butterick publishing co., 1914. 50 cents.

Johnson, Catherine F. Lessons in art and practice of needlework. New York, D. C. Heath & co. xii, 120 p. illus. 1912. 90 cents net.

Johnson, Florence K. How shall the little ones sew? New York, Peoples' university extension society, 105 East 17 st., 1910. 32 p. 10 cents.

Johnson, Gertrude T. Domestic science: A text in cooking and syllabus in sewing. *See* Textbooks in Cooking.

Kinne, Helen, *and* **Cooley, Anna M.** Clothing and health. An elementary textbook of home making. New York, Macmillan, 1916. 302 p. 65 cents.

——— Shelter and clothing. New York, Macmillan co., 1915. 377 p. $1.10.

Kirkwood, Louisa J. Sewing primer. New York, American book co. 30 cents.

Klickmann, Flora. (*Mrs.* **E. Henderson-Smith.**) Little girl's knitting and crochet book. New York, Frederick A. Stokes, 1916. 114 p. 75 cents.

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Krolick, Sarah Ewell. Hand sewing lessons (elementary). New York, Educational publishing co., 1905. 50 cents.

McGlauflin, Idabelle. Handicraft for girls. Peoria, Manual arts press, 1910. 122 p. $1.

Osborn, Lena. Food and clothing. *See* Textbooks in Cooking.

Patton, Frances. Home and school sewing. Chicago, A. Flanagan co., 1901. illus. 234 p. 60 cents.

Robinson, M. E. Principles of sewing. 28 p. (Missouri university. Agricultural extension circular, no. 41, 1917.)

Rudd, Fay Morgan, *and* **Kayser, Francesca E.** Cooking and sewing outline. *See* Textbooks in Cooking.

Short, I. Practical home sewing and dressmaking. Glasgow, Blackie & son, 1910. 3s.

Swanson, Margaret, *and* **Macbeth, Ann.** Educational needlecraft. New York, Longmans, Green & co., 1912. 136 p. $1.35.

Talbot, *Mrs.* **Anna H.,** *and others.* Thrift clothing; with contributions. Flushing, N. Y., 1918. 30 p. 50 cents.

Turner, A. Sewing and textiles. New York, Appleton, 1918. 245 p. $1.75.

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Wakeman, Antoinette V. H., *and* **Heller, Louisa M.** Scientific sewing and garment cutting. Boston, Silver Burdette & co., 1898. 155 p. 50 cents.

Woolman, *Mrs.* **Mary Schenck.** A sewing course for teachers. New York, Frederick A. Fernald, 1907. 104 p. $1.50.

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Ashenhurst, Thomas R. Textile fabrics; weaving and designing. London, Simpkin, 1879. 392 p.

Barker, Alfred F. Introduction to the study of textile design. New York, Dutton, 1903. 205 p. $2.50.

——— *and others.* Textiles. New York, D. Van Nostrand co., 1910. 369 p. illus. $2.

Beaumont, Roberts. Woolen and worsted. New York, Macmillan. 640 p. $10.

Bowman, Frederic H. Structure of the cotton fibre in its relation to technical applications. New York, Macmillan, 1908. $2.75.

——— The structure of the wool fibre, and its relation to the use of wool for technical purposes. New York, Macmillan, 1908. $2.60.

Burkett, C. W., *and* **Poe, C. H.** Cotton. Garden city, N. Y., Doubleday, Page & co., 1906. $2.

Carpenter, Frank G. How the world is clothed. Geographical reader. Chicago, American book co., 1908. 60 cents.

Chamberlain, James F. How we are clothed. Geographical reader. New York, Macmillan, 1901. 40 cents.

Cotton fabrics glossary. New York, F. P. Bennett, 1907. 348 p. $3.

Dooley, William H. Textiles for commercial, industrial and domestic art schools. Rev. ed. New York, D. C. Heath & co., 1912. 252 p. illus. $1.

Dorsey, *Mrs.* Anna Hanson. Warp and woof. Book 1. Linen industry (elementary). New York, Educational publishing co. $1.

Ellsworth, Evelyn P. Textiles and costume design. San Francisco, Elder, 1917. 85 p. $1.

Fox, T. W. Mechanism of weaving. New York, Macmillan, 1911. 464 p. $2.50.

Gibbs, Charlotte M. Household textiles. Boston, Whitcomb & Barrows, 1912. 243 p. $1.25.

Hammond, Matthew Brown. The cotton industry. New York, Macmillan, 1898. 147 p. 60 cents.

Hannan, William. Textile fibres of commerce. London, Chas. Griffin co., 1902. 228 p. $3.

Herzfeld, Joseph. The technical testing of yarns and textile fabrics. New York, Van Nostrand, 1902. 200 p. $3.50.

Herzog, Alois. Determination of cotton and linen. New York, Teachers college, Columbia university, 1910. 35 p. (Technical education bulletin No. 7.) 25 cents.

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International library of technology. Scranton, Pa., International textbook co. $5 each.

Vol. 76. Cotton pickers, cards, drawing, rolls, combers, fly frames.
Vol. 77. Ring frames, cotton mules, twisters, spoolers, warpers, slashers.
Vol. 78. Yarns, cloth rooms, mill engineering, reeling, baling, winding.
Vol. 79. Wool, scouring, drying, burr picking, mixing, carding, spinning, warping.
Vol. 80. Cams, fancy and automatic looms, dobbies, box motions, Leno attachments, Jacquards.
Vol. 81. Weave glosary, fabric analysis, weave varieties, color designs.

Linen, how it grows. National flax fibre co. 32 p. illus. Free.

McLaren, W. S. Spinning woolen and worsted. London and New York, Cassell, 1890. 252 p. $1.

Marsden, Richard. Cotton spinning. New York, Macmillan. $1.75.
——— Cotton weaving. New York, Macmillan. 526 p. $3.

Matthews, Joseph Merritt. Textile fibres, their physical, microscopical and chemical properties. New York, John Wiley & sons, 1907. 630 p. 141 fig. $4.

Nasmith, Joseph. Students' cotton spinning. New York, Van Nostrand, 1892. 484 p. $3.

Nystrom, Paul H. Textiles. New York, D. Appleton & co., 1916. 335 p. $1.50.

Shaw, Joseph T. From wool to cotton. American woolen co. Free. 40 p.

——— Wool trade of the United States: history of a great industry. 1909. Washington, Government printing office, 1909. 10 cents.

Sheffield, C. Silk, its origin, culture, and manufacture. Florence, Mass., Corticelli silk mills, 1911. 50 cents.

Thompson, Eliza B. Cotton and linen departments. New York, Roland press co., 1917. 182 p. (Department store merchandise manuals.) $1.25.

Tryon, Rolla M. Household manufactures in the United States of America. A study of industrial history. Chicago, University of Chicago press, 1917. 413 p. $2 net.

Vickerman, Charles. Woolen spinning. New York, Macmillan. 352 p. $1.75.

Walton, Perry. The story of textiles: a bird's eye view of the history of the beginning and the growth of industry by which mankind is clothed. Boston, Lawrence & co., 1912. 274 p. $3.

Warden, Alexander J. Linen trade: Ancient and modern. New York, Longmans, 1864. 745 p.

Watson, Kate H. Textiles and clothing. Chicago, American school of home economics, 1906. 244 p. (Textbook edition.) $1.25.

Watson, William. Advanced textile design. New York, Longmans, 1913. 461 p. $4.

——— Textile design and color. New York, Longmans, 1912. $2.50.

Wilkinson, Frederick. The story of the cotton plant. Chicago, Appleton, 1916. 187 p. 35 cents.

Williams, Carrie. Rearing silk worms. San Francisco, Whitaker, 1902. 140 p. $1.25.

Woodhouse, Thomas, *and* **Milne, Thomas.** Jute and linen weaving. New York, Macmillan. 590 p. $4.25.

——— Textile design, pure and applied. New York, Macmillan, 1912. 515 p. $3.25.

Woolman, M. S., *and* **McGowan, E. B.** Textiles: a handbook for the consumer. New York, Macmillan, 1913. 428 p. $2.

(a) CHEMISTRY.

Dannerth, Frederick. Methods of textile chemistry. Syllabus of lecture course. New York, John Wiley & son, 1908. 146 p. $2.

Georgievics, George von. Chemical technology of textile fibers. London, Scott, Greenwood & son, 1902. 10s. 6d. Translated by C. Salter von Nostrand. $4.50.

"Treats of chemical aspects of fibers and processes of manufacturing, such as washing, bleaching, carbonizing, mordanting, dyeing; printing, dressing, and finishing. Written and arranged in a clear and forceful style."—Library bulletin, State college of Washington, Pullman, Wash.

Harmuth, Louis. Dictionary of textiles. New York, Fairchild pub. co., 1915. 174 p. $5.

"For home economics departments, libraries, commercial and industrial establishments. Exhaustive compilation of terms and definitions relating to fibers, fabrics, manufacturing and finishing processes, chemicals used for textile purposes, etc. Special attention has been given to obsolete fabrics. French, English, and German textiles. Supersedes Cole's Dictionary of dry goods; out of print."—Library bulletin, State college of Washington, Pullman, Wash.

Miles, F. C. Fiber flag. Washington, Government printing office, 1915. 19 p. (U. S. Department of agriculture. Farmers' bulletin 669.)

Mitchell, Charles A., *and* Prideaux, R. M. Fibers used in textiles and allied industries. New York, Van Nostrand, 1910. $3.

"Classification of textile fibers. Each fiber treated as to its physical and chemical properties; numerous and excellent microscopic drawings."—Library bulletin, State college of Washington, Pullman, Wash.

Sadtler, S. S. Chemistry of familiar things. *See* Chemistry.

Thorp, F. H. Outlines of industrial chemistry. *See* Chemistry.

"Thorp and Sadtler both have chapters on water, soaps, solvent paper and textiles. Good reference for either students or teachers."—Library bulletin, State college of Washington, Pullman, Wash.

Thorpe, *Sir* Edward, *and others*. Dictionary of applied chemistry. 5 vols. Rev. and enl. ed. New York, Longmans, 1912. $70. $15 each.

(b) INDUSTRIES.

Bogart, Ernest L. Economic history of the United States. 2d ed. New York, Longmans, 1907–12. 597 p. $1.75.

Chapters on cotton and slavery, p. 182–47; introduction, domestication and growth of the factory system, p. 148–88; slavery and the South, p. 290–305.

Brooks, Eugene C. Story of cotton and development of the cotton states. Chicago, Rand & McNally, 1911. 370 p. illus. 75 cents.

"Treats of one of the greatest industries of the world and its relation to the life of the people. Approaches the subject from historic and economic aspects in its relation to the political forces of the world."—Library bulletin, State college of Washington, Pullman, Wash.

Coman, Katharine. The industrial history of the United States. New and rev. ed. New York, Macmillan, 1905-10. 461 p. $1.60.

Hooper, Luther. Hand-loom weaving: plain and ornamental. Artistic crafts series of technical handbooks. New York, Macmillan, 1910. $2.25.

——— Loom and spindle; past, present, and future. *In* Smithsonian institution. Report, 1914. p. 629–78.

McVey, Frank L. Modern industrialism. New York, Appleton, 1904. $1.50.

Scherer, James A. B. Cotton as a world power; a study in the economic interpretation of history. New York, Stokes, 1916. 452 p. $2.

Seligman, Edwin R. A. Economic interpretation of history. 2d ed. New York, Lemcke, Columbia university press, 1907. $1.50.

Special libraries association. List of references on textile industry. December, 1917, and January, 1918. New York, Special libraries association, Prentice-Hall, inc., 70 Fifth ave.

Thompson, Holland. From the cotton field to the cotton mill. New York, Macmillan, 1906. $1.50.

A study of industrial transition in North Carolina; a typical cotton state.

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"A valuable reference for high and normal schools and colleges. Furnishes a background for historic, economic and social phases of textile study and is an excellent supplementary reference to such texts as McVey's Modern industrialism. It deals with such topics as the status and factors affecting household manufactures in the colonies; a quartercentury of developments, 1784–1809; the products of the family factory; the transition from family to shops and factory-made goods. Advance chapters were issued in elementary school journal, November and December, 1916."—Library bulletin, State college of Washington, Pullman, Wash.

Wright, Carroll D. Industrial evolution of the United States. New York. Scribners, 1895–7. $1.25.

(c) MANUFACTURE AND SALE.

Beaumont, Roberts. Wool and worsted cloth manufacture. London, Bell & sons, 1887. 465 p. $1.75.

Cherington, Paul T. The wool industry. New York, A. W. Shaw co., 1916. 261 p. $2.50.

"Concentrates on the hitherto unexplored territory of the buying and selling of wool products, describing in detail the function and importance of wool merchants, selling houses, dry goods, jobbing enterprises and department stores. Chapters on technical process, imported fabrics, ready-to-wear clothing industries and two valuable chapters on how styles are set and adopted and their influence in making and selling cloth. Written for students of economics. Very important chapters on how styles are set and adopted and their influence in making and selling cloth. Should be studied by every consumer."—Library bulletin, State college of Washington, Pullman, Wash.

Chittick, James. Silk manufacturing and its problems. New York, James Chittick, 122 E. 25th st. 432 p. $2.50.

"Written by an authority from the manufacturer's view point, primarily for producers and distributors of silk merchandise. Even though much of the book is devoted to the technique of milling operations it gives the consumer an inside view of innumerable complex factors involved in the manufacture and distribution of textiles; place and methods of advertising and merchandising are emphasized in the relation of their disposal to the consumer. The book gives the reader a much better knowledge of fabrics and their costs."—Library bulletin, State college of Washington, Pullman, Wash.

Copeland, Melvin T. Cotton manufacturing industry of United States. Boston, Harvard university press, 1912. 415 p. $2.

"Through its broad scope of subject matter it furnishes the requisite background for the teacher and advanced student in the economic study of the development of textile industry. Sets forth the relative position of the American cotton manufacturing industry by means of an international comparison of geographical factors, technical methods, labor conditions, and industrial and commercial organizations."—Library bulletin, State college of Washington, Pullman, Wash.

Field, C. C. Retail buying. New York, Harper, 1916. 335 p. $1.

"Discusses the buying policies of department and chain stores as well as mail-order houses; pricing and stock keeping; display; selection of merchandise; instruction of salespeople, etc. Author has been connected with such stores as Marshall Field & co., of Chicago, and James McCreery, of New York. Will also be very informing to the woman shopper."—Library bulletin, State college of Washington, Pullman, Wash.

Fisk, James W. Retail selling. New York, Harper, 1916. 335 p. $1.

"Said to be a 'guide to the best modern practice in retail stores.' While written exclusively for those engaged in selling goods and undoubtedly calculated to help make them 100 per cent alert and efficient in that respect, we cordially commend it to the thoughtful perusal of women shoppers. Certain mental characteristics (?) of women to whom salesmen must cater are analysed and methods of advertising and display calculated to sell by subtle appeal to the senses are explained, all with brutal frankness. Such practices of exploiting the consumer should warn her away from stores which follow them and lay the charge of extravagance at the door of the merchant rather than of the American woman."—Library bulletin, State college of Washington, Pullman, Wash.

Hooper, Luther. Silk; its production and manufacture. London, Pitman, 1911. 52 p. 75 cents.

"This and the two following are excellent little popular English manuals, giving brief introduction to the industry, describing it from raw material to finished product."—Library bulletin, State college of Washington, Pullman, Wash.

Hunter, J. A. Wool; from the raw material to the finished product. London, Pitman, 1915. 118 p. 75 cents.

Kissell, Mary L. Yard and cloth making; an economic study; a college and normal school text preliminary to fabric study. New York, Macmillan, 1918. 252 p.

Kline, Samuel. A manual of the processes of winding, warping, and quilling of silk and other yarns from the skein to the loom. New York, John Wiley & sons, 1918. 134 p. $2.

Mitchell, C. A., *and* **Prideaux, R. M.** Fibres used in textile manufacture and allied industries. New York, Van Nostrand, 1911. $3.

Moore, Alfred S. Linen; from the raw material to the finished product. London, Pitman, 1914. 132 p. 75 cents.

Nystrom, Paul H. Economics of retailing. New York, Ronald press, 1915. 407 p. $2.

"A broad study of retail distribution by a teacher of economics, for the merchant and student. Chapters of special value to the consumer on the distribution system; the consumer; how retail prices are fixed; the department store; the chain store; mail-order house; price maintenance and public regulation. Especially thoughtful is the final chapter on the ideal retailing system in which immense saving is admitted possible in the cost of distribution, ultimately available to the consumer."—Library bulletin, State college of Washington, Pullman, Wash

Posselt, Emanuel A. Cotton manufacturing. Philadelphia, Baird, 1903. 484 p. $6.

Ross, Edward A. Social psychology. New York, Macmillan, 1908. $1.50.

" Chapter 6 is an excellent analysis of the psychology of fashion."—Library bulletin, State college of Washington, Pullman, Wash.

Todd, Mattie P. Hand-loom weaving; a manual for school and home. Chicago, Rand, 1902. 90 cents net.

Umpleby, Fenwick. Textile design. A working manual of approved practice (technical). Chicago, American school of correspondence, 1909. 338 p. $3.

United States congress. House committee on ways and means. To reduce the duties on manufacture of wool. Report. Washington, Government printing office, 1912. 82 p. 10 cents.

Wyckoff, William C. Silk manufacture in the United States. New York, L. Belcher, printer, 1883.

Zipser, Julius. Textile raw materials and their conversion into yarn. New York, Van Nostrand, 1901. 498 p. $5.

Translated by C. Salter.

(*d*) MILLS—CONDITION OF WORKERS.

(*See also* Women and Industry.)

Bryner, Edna. The garment trades. Cleveland foundation. Survey committee. Cleveland education survey reports, 1916. vol. 19. 153 p. 25 cents.

Carlton, Frank T. History and problems of organized labor. New York, Heath, 1911. 483 p. $2.

Chapter 12 on the sweated industries.

Cohen, Julius H. Law and order in industry; five years experience. New York, Macmillan, 1916. 292 p. $1.50.

"The authoritative account of the workings of the protocol or collective bargaining between employers and garment workers. Advocates the white protocol label for all ready-to-wear clothes as indication to consumers of their production under sanitary conditions and fair treatment as to wages, hours, etc.—Library bulletin, State College of Washington, Pullman, Wash.

Priddy, Al. (Frederic K. Brown.) Through the mill: life story of a mill boy. Boston, Pilgrim press, 1911. 289 p. $1.35.

An autobiography. First appeared in the Outlook.

VIII. THE FAMILY.

1. THE CHILD.

(*See also* Motherhood and Infant Feeding.)

Allen, Mary Wood. Making the best of our children. Chicago, A. C. McClurg & co., 1909. $1.

Birney, *Mrs.* Alice. Childhood. New York, Frederick A. Stokes co., 1905. $1.

Brown, Daniel Rollins. The baby; a book for mothers and nurses. Boston, Whitcomb & Barrows, 1908. 200 p. $1.

Burbank, Luther H. Training of the human plant. New York, Century co., 1907. 99 p. 60 cents.

Chapin, Henry D., *and* Pisek, Godfrey R. Diseases of infants and children. New York, William Wood & co., 1915. 578 p. $3.25.

Cooke, Joseph B. The baby, before and after arrival; intimate talks with prospective mothers in plain, non-technical language. Philadelphia, Lippincott, 1916. 238 p. $1.

Coolidge, Emelyn L. First aid in nursery ailments. New York, Sturgis & Walton co., 1915. 77 p. 50 cents.

——— Home care of sick children. Chicago, Appleton, 1916. 282 p. $1.

Cotton, A. C. Care of children. Chicago, American school of home economics, 1907. 208 p. $1.50. Textbook edition, $1.25.

Dawson, George E. The child and his religion. Chicago, University of Chicago press, 1909. 130 p. 75 cents.

Dennett, R. The healthy baby. New York, Macmillan co., 1912. 235 p. $1.

Dickinson, May Bliss. Children well and happy. A manual for the girl's health league. Boston, LeRoy Phillips, 1918. 115 p. 60 cents.

Eghian, Setrak G. The mother's nursery guide. New York, G. Putnam's sons. 1907. 263 p. $1.

Fischer, Louis. Diseases of infancy and childhood. Philadelphia, F. A. Davis co., 1910. $6.50.

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Fitz, *Mrs.* Rachel K., *and* Fitz, George W. Problems of babyhood. Building a constitution; forming a character. New York, Henry Holt & co., 1906. $1.25.

Forsyth, David. Children in health and disease. Philadelphia, P. Blakiston's sons' co., 1909. $3.

Goodnow, Minnie, *and* **Pasley, Zula.** Nursing of children. New York, Lakeside publishing co., 1914. 208 p. $1.

Gorst, John E. Children of the nation; how their health and vigor should be promoted by the state. New York, C. P. Dutton & co., 1907. $2.50.

Griffith, J. P. Crozer. Care of the baby; a manual for mothers and nurses. Philadelphia, Saunders, 1911. 404 p. $1.50.

Gruenberg, Sidonie Matzner. Your child to-day and to-morrow. Philadelphia, J. B. Lippincott co., 1913. 234 p. $1.25.

Hall, G. Stanley, *and others.* Aspects of child life and education. Chicago, Ginn & co., 1907. 326 p. $1.80. School edition, $1.50.

Harrison, Elizabeth. A study of child nature. Chicago, Kindergarten college, 1900. 207 p. $1.

Hillyer, V. M. Kindergarten at home. Garden City, N. Y., Doubleday, Page & co., 1911. 152 p. $1.25.

Holmes, Arthur. The conversation of the child. Philadelphia, J. B. Lippincott co., 1912. 345 p. $1.25.

——— Principles of character making. Philadelphia, J. B. Lippincott co., 1913. 336 p. $1.25.

Holt, L. Emmet. Diseases of infancy and childhood. Chicago, Appleton & co., 1911. 1112 p. $6.

——— *and* **Shaw, H. L. K.** Save the babies. Chicago, American medical association, 1915. 19 p.

Indiana. State board of health. Mothers' baby book.
Distributed free.

Kerley, Charles Gilmore. Short talks with young mothers on the management of infants and young children. New York, G. P. Putnam's sons, 1909. 345 p. $1.

——— Treatment of the diseases of children. Philadelphia, Saunders, 1909. 629 p. $5.

Kerr, Le Grand. The care and training of children. New York, Funk & Wagnalls co., 1910. 75 cents.

Lynch, Ella Frances. Educating the child at home. New York, Harper & brothers, 1914. 214 p. $1.

Lyttelton, Edward. The corner-stone of education. An essay on the home training of children. New York, G. P. Putnam's sons, 1914. 242 p. $1.25.

McCracken, Elizabeth. The American child. New York, Houghton Mifflin co., 1913. 191 p. $1.25

Mangold, George B. Child problems. New York, Macmillan co., 1910. 381 p. $1.25.

Meigs, Grace L. Infant welfare work in wartime. Chicago, American medical association, 1917.
Reprinted from the American journal of diseases of children, 14:80-97, August 1917.

Mendel, Lafayette B. Childhood and growth. New York, Frederick A. Stokes co., 1906. 60 cents.

Montessori, Maria. Dr. Montessori's own handbook. New York, Frederick A. Stokes co., 1914. 121 p. $1.

Mumford, Edith E. R. The dawn of character. A study of child life. New York, Longmans, Green & co., 1910. $1.20.

Noyes, Anna G. How I kept my baby well. Baltimore, Warwick & York. 1913. 193 p. $1.25.

Oppenheim, Nathan. The care of the child in health. New York, Macmillan, 1900. 308 p. $1.25.

——— Development of the child. New York, Macmillan, 1898. $1.25.

Poulsson, Emilie. Love and law in child training. Springfield, Milton Bradley co., 1899. $1.

Ramsey, Walter R. Infancy and childhood. A popular book on the care of children. New York, E. P. Dutton & co., 1916. 198 p. $2.

Richardson, Anna S. Better babies and their care. New York, Frederick A. Stokes co., 1914. 288 p. 75 cents.

Smith, Nora A. The home-made kindergarten. Boston, Houghton Mifflin co., 1911. 44 p. 75 cents.

——— The kindergarten in a nutshell. Garden city, N. Y., Doubleday, Page & co., 1899. 50 cents.

Smith, Richard M. Baby's first two years. Boston, Houghton Mifflin co., 1915. 156 p. 75 cents.

Spiller, Gustav. The training of the child: a parent's manual. New York, Dodge publishing co., 1913. 93 p. 20 cents.

Starr, Louis. The hygiene of the nursery. Philadelphia, P. Blakiston's sons & co., 1906. 331 p. $1.

Terman, Lewis M. Hygiene of the school child. Boston, Houghton Mifflin co., 1914. 417 p. $1.75.

Tweddell, Francis. Mothers' guide. New York, Dougherty, 1911. 182 p. $1.

Wadhams, Caroline Reed. Simple directions for the child's nurse. New York, Longmans, 1916. 50 cents.

Wallin, J. E. Mental health of the school child. New Haven, Yale university press, 1914. 463 p. $2.

Washburne, Marion F. Study of child life. Chicago, American school of home economics, 1905. 183 p. $1.50.

Westlake, Albert. Baby's teeth to the twelfth year. New York, Mitchell Kennerley, 1912. 35 p. 50 cents.

Wheeler, Marianna. The baby: his care and training. New York, Harper & bros., 1901. $1.

——— Plain hints for busy mothers. New York, Treat, 1908. 35 cents.

——— The young mother's handbook. New York, Harper & bros. $1.

Wiggin, Kate Douglas. The kindergarten. Rev. ed. New York, Harper & bros. $1.50.

2. ORGANIZATION OF THE FAMILY.

Bosanquet, Helen. The family. New York, Macmillan, 1906. $2.75.

——— The strength of the people. New York, Macmillan, 1902. $2.75.

Calhoun, Arthur W. Social history of the American family from the colonial times to the present. Cleveland, Ohio., Arthur H. Clark co., 1918. 390 p. $5.

Dealey, J. Q. The family in its sociological aspects. Boston, Houghton Mifflin co., 1912. 75 cents.

Devine, Edward T. Family and social work. New York, Young men's Christian association, 1912. 163 p. 60 cents.

——— Social forces. New York, Charities publication committee, 105 East 22d street, 1910. $1.25.

Earle Alice Morse. Home life in colonial days. New York, Macmillan, 1898. $2.50.

Gillette, John M. The family and society. Chicago, A. C. McClurg, 1913. 50 cents.

Goodsell, Wyllistine. The history of the family as a social and educational institution. New York, Macmillan, 1915. 588 p. $2.

Hiller, Gustavus E. The Christian family. New York, Methodist book concern, 1907. $1.25.

Howard, George E. The family and marriage: an analytical reference syllabus. Lincoln, Nebr., University of Nebraska, 1914. 75 cents.

——— A history of matrimonial institutions, chiefly in England and the United States. 3 vols. Chicago, University of Chicago press, 1904. $10.

Jordan, W. G. Little problems of married life. New York, Fleming H. Revell co., 1910. 256 p. $1.

Key, Ellen K. S. The century of the child. New York, G. P. Putnam's sons, 1909. $1.50.

Lee, Porter R. Family rehabilitation. Methods employed by organized charity in the rehabilitation of families. New York, Russell Sage foundation, 1910. 16 p. 3 cents. 70 cents per 100.

Lofthouse, W. F. Ethics and the family. New York, George H. Doran, 1912. $2.50.

Parsons, Elsie Clews. The family: Ethnographical and historical outline; with descriptive notes. New York, G. P. Putnam's sons, 1906. $3.

Robins, J. B. The family, a necessity of civilization. New York, Fleming H. Revell co., 1901. $1.25.

Saleeby, Caleb W. Parenthood and race culture; outline of eugenics. New York, Moffat, Yard & co., 1909. $2.50.

Schouler, James. Law of domestic relations. Boston, Little, Brown & co. $3.

Starr, Frederick. Some first steps in human progress. Chautauqua, N. Y., Chautauqua press, 1910. 256 p. $1.

Thomas, William I. Self and society. Chicago, University of Chicago press, 1907. $1.50.

——— Source book of social origins. Chicago, University of Chicago press, 1909. $4.50.

Thwing, Charles F., *and* **Butler, Carrie F.** The family: an historical and social study. Rev. & enl. Boston, Lothrop, Lee & Shephard co., 1913. 258 p. $1.60.

Todd, Arthur James. The primitive family as an educational agency. New York, G. P. Putnam's sons, 1913. 251 p. $1.75.

Wells, G. H. Socialism and the family. Boston, Ball publishing co., 1908. 50 cents.

Westermarck, Edward A. History of human marriage. 3d ed. New York, Macmillan co., 1902. $4.50.

3. THE HOME.

(a) GENERAL LITERATURE.

Busbey, Katherine G. Home life in America. New York, Macmillan, 1910. 410 p. $2.

Chapter on shops and shoppers.

Campbell, Helen. Household economics: A course of lectures in the school of economics in the University of Wisconsin. New York, G. P. Putnam's sons, 1897. 286 p. $1.50.

Gilman, Charlotte P. The home. Garden City, N. Y., Doubleday, Page & co., 1910. 347 p. $1.50.

Hunt, Caroline L. Home problems from a new standpoint. Boston, Whitcomb & Barrows, 1908. 145 p. $1.

Ravenhill, Alice, *and* **Schiff, Catherine J.,** *eds.* Household administration, its place in the higher education of women. New York, Henry Holt & co., 1911. 324 p. $1.50 net.

Richards, Ellen H. The art of right living. Boston, Whitcomb & Barrows, 1904. 50 p. 50 cents.

——— Euthenics; the science of controllable environment. Boston, Whitcomb & Barrows, 1910. 162 p. $1.

Salmon, Lucy M. Progress in the household. New York, Houghton Mifflin co., 1906. $1.10.

Stocking, Jay T. The dearest spot on earth. Atlanta, Ga., Caldwell, 1908. $1.

Stout institute. Bulletins. Outlines of home and social economics. *See* Bibliographies.

Talbot, Marion, *and* **Breckinridge, S. P.** The modern household. Boston, Whitcomb & Barrows, 1912. 93 p. $1.

Ware, J. F. W. Home life, what it is and what it needs. Boston, Lothrop, Lee & Shephard co. $1.

(b) ECONOMIC PROBLEMS.

Blackmar, Frank W. Economics. New York, Macmillan, 1900–07. $1.40.

Chapter on consumption.

Boucke, O. Fred. Rising cost of living. Menasha, Wis., George Banta publishing co., 1916. 87 p. 75 cents. (The collegiate press.)

Brown, Mary W. Development of thrift. New York, Macmillan, 1899. $1.

Chapin, Robert C. Standard of living among workingmen's families in New York city. New York, Survey associates, 1909. 388 p. $2.

Clark, Walter E. The cost of living. Chicago, A. C. McClurg, 1915. 168 p. 50 cents.

Creighton, Louise H. The economics of the household. Six lectures at the London school of economics. London, Longmans, 1907. 50 cents.

Ely, Richard A., *and* **Wicker, George R.** Elementary principles of economics, New York, Macmillan, 1904. $1.

Chapter on economy of spending and saving.

Fetter, Frank A. Principles of economics. New York, Century co., 1904. $2.

Chapter on economic motives, waste and luxury, and reaction of consumption on production.

Fisher, Irving. Why is the dollar shrinking? New York, Macmillan, 1914. 233 p. $1.25.

Franklin, Fabian. Cost of living. Garden city, N. Y., Doubleday, Page & co., 1915. 262 p. $1.

Franks, Thetta Q. (*Mrs.* **Robert A.**) Margin of happiness. New York, Putnam, 1917. 238 p. $1.50.

Gerber, George H. The high cost of living. New York, New York book co., 1915. 150 p. 50 cents.

Gibbs, Winifred S. Minimum cost of living; a study of families of limited incomes in New York city. New York, Macmillan, 1917. 83 p. $1.

Gilman, *Mrs.* **Charlotte P. S.** Women and economics. Boston, Small, Maynard & co. 340 p. $1.50.

King, Willford I. Wealth and income of the people of the United States. New York, Macmillan, 1915. 278 p. $1.50.

Lauck, W. Jett. Cost of living and the war. An analysis of recent changes. Cleveland, Doyle & Waltz printing co., 1918. 196 p. $1.50.

Layton, Walter T. An introduction to the study of prices, with special reference to the history of the nineteenth century. 1912. 158 p. 90 cents.

National industrial conference board. Wartime changes in the cost of living. Boston, National industrial conference board, 1918. Research report no. 9, August, 1918.

Nearing, Scott. Financing the wage-earner's family: a survey of the facts bearing on income and expenditures in the families of American wage-earners. New York, B. W. Huebsch, 1913. 1913. 171 p. $1.25.

——— Reducing the cost of living. Philadelphia, Jacobs, 1914. 343 p. $1.25.

Richardson, Bertha June. The woman who spends: a study of her economic function. Boston, Whitcomb & Barrows, 1910. 161 p. $1.

Ryan, John A. A living wage. New York, Macmillan, 1906. $1.

Seager, Henry R. Principles of economics. New York, Holt, 1913. 662 p. $2.25.

Chapters on Consumption and values in use.

Streightoff, Frank H. Standard of living among the industrial people of America. Boston, Houghton Mifflin co., 1911. 196 p. $1.

Veblen, Thorstein B. Theory of the leisure class. New York, Macmillan, 1897. $2.

(c) MOTHERHOOD.

(*See also* The Child.)

Ballantyne, John W. Expectant motherhood—its supervision and hygiene. New York, Funk & Wagnalls, 1914. 288 p. $1.50.

Nearing, Scott, ***and*** **Nellie, M. S.** Woman and social progress. A discussion of the biologic, domestic, industrial, and social possibilities of American women. New York, Macmillan, 1912. 281 p. $1.50.

Nims, Marion R. Women in the war. A bibliography. *See* Bibliographies.

Scharlieb, ***Mrs.*** **A. D.** Womanhood and regeneration. New York, Moffat, Yard & co., 1912. 54 p. 50 cents.

Slattery, Margaret. The American girl and her community. Boston, Pilgrim press, 1918. 170 p. $1.25.

Spencer, Anna Garlin. Woman's share in social culture. New York, Mitchell Kennerley, 1912. 331 p. $2.

Tarbell, Ida M. The business of being a woman. New York, Macmillan co., 1912. 242 p. $1.25.

United States. Department of agriculture. Office of the Secretary. Needs of farm women. Washington, Government printing office. (Reports no. 103, 104, 105, 106.)

Vuyst, Paul de. Woman's place in rural economy. A study in sociology. Trans. by Nora Hunter. Glasgow, Blackie & son, 1913. 151 p. 3 shillings 6 pence.

Wilson, Jennie L. The legal and political status of women in the United States. Cedar Rapids, Iowa, Torch press, 1912. 336 p. $2.50.

5. WOMEN IN INDUSTRY.

(*See also* Domestic Service.)

Abbott, Edith. Women in industry. New York, Appleton, 1910. $2.

Allison, May. Dressmaking as a trade for women in Massachusetts. Washington, Government printing office, 1918. (U. S. Bureau of labor statistics. Bulletin, 193.)

"Evolution of the trade in the United States; the trade of today; and industrial conditions in it, with bibliography."—Library bulletin, State college of Washington, Pullman, Wash.

——— Industrial experience of trade school girls in Massachusetts. Boston, Women's educational and industrial union. 275 p. 80 cents.

Blatch, Harriet Stanton. Mobilizing woman power. New York, The woman's press, 1918. 195 p. $1.25.

Bosworth, Louise M. The living wage of women workers. A study of incomes and expenditures for 450 women workers in the city of Boston. Philadelphia, American academy of political and social science, 1911. 90 p. 75 cents.

Brooks, John G. Social unrest: studies in labor and socialist movements. New York, Macmillan, 1903. $1.50.

Campbell, Helen S. Women wage-earners. Boston, Little, Brown & co. $1.

Carlton, Frank T. History and problems of organized labor. New York, Heath, 1911. 483 p. $2.

Clark, ***Mrs.*** **Sue A.,** ***and*** **Wyatt, Edith F.** Making both ends meet: The income and outlay of New York working girls. New York, Macmillan, 1911. 270 p. $1.50.

Cooley, Charles H. Social organization. New York, Scribner, 1909. .$1.50.

Daniels, Harriet McDougal. The girl and her chance. New York, Fleming H. Revell co. 95 p. 50 cents.

A study of conditions surrounding the young girl between 14 and 18 years of age in New York city.

Dyer, Henry. Education and industrial training for boys and girls. Glasgow, Blackie & sons, ltd. 25 cents. •

Ely, Richard T. Studies in the evolution of industrial society. New York, Macmillan, 1903. $1.25.

Foster, William T., *ed.* The social emergency. New York, Houghton Mifflin co., 1914. 224 p. $1.35.

Chapter 5 deals with economic phases (relation of low wages to women and the social evil).

Franks, Thetta Quay. Household organization for war service. New York, G. P. Putnam's sons, 1917. 93 p. $1.

Fraser, Helen. Women and war work. New York, G. Arnold Shaw, 1918. 302 p. $1.50.

Hahn, *Rev.* **H.** Vocations (women). Chicago, Bensiger, 1913. $1.75.

Henry, Alice. The trade union woman. New York, Appleton, 1915. 314 p. $1.50.

Account of the movement for and by women's trade unionism in United States. Especially chapter on "the huge strike."

Kelley, Florence. Modern industry, in relation to the family, health, education, morality. New York, Longmans, 1914. 147 p. $1.

"Four vitally suggestive lectures, by Secretary of National consumer's league, clearly showing the disintegrating effect of modern industry upon family life and upon health; and the new education and morality demanded in relation to the industrial system. Should be read by every consumer."—Library bulletin, State college of Washington, Pullman, Wash.

Laselle, Mary A., *and* **Wiley, Katherine E.** Vocations for girls. Boston, Houghton Mifflin co., 1913. 139 p. 85 cents.

The long day; the story of a New York working girl. New York, Century, 1905. $1.20.

McLaren, *Mrs.* **Barbara.** Women of the war. New York, Doran, 1918. 160 p. $1.50.

McLean, Annie M. Women workers and society. Chicago, McClurg, 1917–18. 135 p. 50 cents.

"Adapted for reading and discussion in clubs of less highly trained women and girls. To be commended for its discussion of industrial evils and remedies."—Library bulletin, State college of Washington, Pullman, Wash.

Marot, Helen. The creative impulse in industry. New York, Dutton & co., 1918. 146 p. $1.

Montgomery, Louise. The American girl in the stockyards district. An investigation carried on under the direction of the board of the University of Chicago settlement and the Chicago alumnae club of the University of Chicago. Chicago, University of Chicago press, 1913. 70 p.

Morley, Edith I. Women workers in seven professions. A survey of their economic conditions and prospects. New York, Dutton & co., 1914. 318 p. $2.

Murtland, Cleo, *and* Prosser, Charles A. Study of the dress and waist industry for the purpose of industrial education. Washington, Government printing office, 1914. (U. S. Bureau of labor statistics. Bulletin no. 145.)
Reprint of Appendix 1.

Parsons, Frank. Choosing a vocation. Boston, Houghton Mifflin co., 1909. $1.

Pickard, Andrew E., *and* Henegren, Marie C. Industrial work for girls. St. Paul, Minn., Webb publishing co., 1916. 145 p. 40 cents.

Ravenel, *Mrs.* Florence (Leftwich). Women and the French tradition. New York, Macmillan, 1918. 234 p. $1.50.

Ryan, John A. A living wage, its ethical and economic aspect. New York, Macmillan, 1906. $1.

Schreiner, Olive. Women and labor. New York, Stokes, 1911. 299 p. $1.25.

Special libraries association. Women. War time occupations and employment. New York, Special libraries association: Prentice-Hall, inc., 1918.

Stout institute. Bulletins. Outlines of home and social economics. Women in modern industry. *See* Bibliographies.

Streightoff, Frank H. Standard of living among the industrial people of America. Boston, Houghton Mifflin co., 1911. 196 p. $1.

Thomas, Helen L. Occupations for girls; suggestions for the preparation of vocational charts. New York, Young women's Christian association, 1917. 18 p. 25 cents.

Usborne, H. M. Women's work in war time. A handbook of employments. London, T. Werner Laurie, 1917. 174 p. 60 cents.

Van Kleeck, Mary. Working girls in evening schools. New York, Survey associates, 1914. 252 p. $1.50.

Verrill, Charles H. Minimum wage legislation. Washington, Government printing office, 1915. 335 p. (U. S. Bureau of labor statistics. Bulletin 167.) 35 cents.
History, texts and operation of the laws. Bibliography.

Weaver, Eli W. Vocation for girls. New York, S. A. Barnes publishing co., 1913. 200 p. 75 cents.

Women's educational and industrial union. Department of research. Food of working women in Boston. Boston, Women's educational and industrial union, 1917. 213 p. $1 net.

——— Industrial experience of trade school girls in Massachusetts. Boston, Women's educational and industrial union, 1917. 275 p. 80 cents net.
Research made under the direction of May Allison.

Woolman, Mary S. Making a trade school. Boston, Whitcomb & Barrows, 1910. 67 p. 50 cents.

——— Wage-earning occupations connected with the household art. Brooklyn, N. Y., Students' aid committee, 25 Jefferson ave. 8 p. 5 cents.

IX. FOODS AND COOKING.

1. COOK BOOKS.

Abel, Mary Hinman. Practical, sanitary and economic cooking; adapted to persons of moderate means. Rochester, N. Y., American public health association, 1890. 190 p. 50 cents.

Bache, Elizabeth D. B., *and* **Bache, Louise F.** When mother lets us make candy. 1915. 184 p. 75 cents.

Bailey, Harriet P. On the chafing dish. New York, G. W. Dillingham co. 50 cents.

Barroll, Mary Louise. Around-the-world cook book; the culinary gleanings of a naval officer's wife. New York, Century co., 1918. 360 p. $1.50.

Beezley, Ruth A. National course in home economics. Chicago, Walter, 1917. 650 p. $2.75.

Bradley, Alice. Candy cook book. Boston, Little, Brown & co., 1917. 222 p. $1.

——— Lessons in food values and economical menus. Boston, Miss Farmer's school of cookery, 1918. 35 p. 25 cents.

——— Wheatless and meatless menus and recipes. Boston, Miss Farmer's school of cookery, 1918. 35 p. 25 cents.

Braun, Emil. Bakers cook book. New York, D. Van Nostrand, 1901. 2 vols. $2.50 each.

Brillat-Savarin, Jean Anthelme. Handbook of dining. Trans. by L. F. Simpson. 1865. 32 p.

Brugière, Sara Van Buren. Good living; a practical cookery book for town and country. New York, G. P. Putnam's sons, 1908. $2.

Burrell, Caroline B. (Benton, Caroline French.) A little cook book for a little girl. Boston, Page co. 85 cents.

Clarke, Helen C., *and* **Rulon, P. D.** Cook book of left overs. New York, Harper & bros., 1911. $1.10.

Congreve, A. E. The one-maid book of cookery. New York, E. P. Dutton & co., 1918. 217 p. $1.

Cooper, Lenna F. How to cut food costs. Battle Creek, Mich., Good health publishing co., 1917. 128 p. 75 cents.

——— The new cookery; a book of recipes most of which are in use in the Battle Creek sanitarium. Battle Creek, Mich., Good health publishing co., 1916. 449 p. $1.50.

Cramp, Helen. Winston cook book. Philadelphia, J. C. Winston co., 1912. 512 p. illus. $1.20.

Curtis, Isabel G. Left overs made palatable. New York, Orange, Judd co., 1901. $1.

Cutter, *Mrs.* **B. B. (Sophia G.)** Practical recipes. New York, Duffield & co., 1909. 177 p. $1.25.

Déliée, Felix J. The Franco-American cookery book. New York, G. P. Putnam's sons., 1884. 620 p. $8.50.

DeLoup, Maximilian. American salad book. Garden city, N. Y., Doubleday, Page & co., 1899. 140 p. $1.

Doddridge, Amelia. Liberty recipes. Cincinnati, Stewart & Kidd co., 1918. 106 p. $1.25.

East, Anna Merritt. Kitchenette cookery. Boston, Little, Brown & co., 1917. 112 p. $1.

Escofficer, M. Guide to modern cooking. Garden city, N. Y., Doubleday, Page & co., 1907. $4.

Evans, Mary Elizabeth. War time recipes. New York, Frederick A. Stokes co., 1918. 164 p. $1.25.

Farmer, Fannie M. Book of good dinners for my friend. New York, Dodge publishing co., 1914. 264 p. 60 cents.

——— Boston cooking-school cook book. rev. ed. Boston, Little, Brown & co., 1918. 656 p. $2.

——— Chafing dish possibilities. Boston, Little, Brown & co. 160 p. $1.

——— Food and cookery for the sick and convalescent. Boston, Little, Brown & co., 1904. 278 p. rev. with additions, 1912. 305 p. $1.75.

——— A new book of cookery Boston, Little, Brown & co., 1912. 440 p. $1.60.

Filippini, Alexander. International cook book. Garden city, N. Y., Doubleday, Page & co., 1914. 1059 p. $2.

——— International cook book. Garden city, N. Y., Doubleday, Page & co., 1906. $4.80.

——— One hundred ways of cooking eggs. New York, Dodge publishing co., 1915. 122 p. 50 cents.

——— One hundred ways of cooking fish. New York, Dodge publishing co., 1916. 50 cents.

Fox, Minnie C. The blue grass cook book. New York, Duffield & co., 1904. $1.50.

Gallier, Adolphe. The majestic family cook book. New York, G. P. Putnam's sons, 1896. 419 p. $2.50.

Gibbs, Winifred S. Economical cookery. New York, 1912. 157 p. 15 cents.

Giger, *Mrs.* F. S. The colonial receipt book. Philadelphia, J. C. Winston co., 1907. $1.50.

Gillmore, Maria McIllvaine. Economy cook book. New York, Dutton, 1918. 215 p. $1.

Glover, Ellye Howell. Dame Curtesy's book of recipes. Chicago, A. C. McClurg & co., 1909. $1.

Goudiss, C. H., *and* Goudiss, *Mrs.* A. M. Foods that will win the war and how to cook them. New York, World syndicate co., 1918. 221 p. 50 cents.

Green, Mary. (Greenough, M. M.) Better meals for less money. New York, Henry Holt & co., 1917. 295 p. $1.25.

Green, Olive. **(Reed, Myrtle.)** Home-maker series: 1. What to have for breakfast (1905). 2. Every-day luncheon (1906). 3. One thousand simple soups. 4. How to cook shellfish (1907). 5. How to cook fish (1908). 6. How to cook meat and poultry (1908). 7. How to cook vegetables (1909). 8. One thousand salads (1909). 9. Every-day desserts (1911). 10. Every-day dinners (1911). New York, G. P. Putnam's sons. Each $1.

Handy, Amy L. War time bread and cakes. Boston, Houghton Mifflin, 1918. 66 p. 75 cents.

——— War food; practical and economical methods of keeping vegetables, fruits and meats. Boston, Houghton Mifflin, 1917. 76 p. 75 cents.

Harbison, Edith G. Low cost recipes. Philadelphia, Jacobs, 1914. 208 p. 75 cents.

Harlan, Helen Hammel. Wheatless-meatless meals. Chicago, American school of home economics, 1918. 47 p. (Series 1. Bulletin no. 50.) 10 cents.

Harland, Marian. Breakfast, luncheon, tea. New York, Charles Scribner's sons. $1.75.

——— The cottage kitchen. New York, Charles Scribner's sons. $1.

——— *and* **Herrick, C. T.** The national cook-book. New York, Charles Scribner's sons. $1.50.

——— ——— Helping hand cook book, with a menu for every day in the year, together with numerous recipes. 1912. 340 p. $1.25.

Heritage, Lizzie. Cassell's household cookery. New York, Funk & Wagnalls co., 1909. $1.50.

Herrick, Christine Terhune. The chafing-dish supper. New York, Charles Scribner's sons. 75 cents.

——— The little dinner. New York, Charles Scribner's sons. $1.

——— Sunday night supper. Boston, Dana, Estes & co., 1907. $1.

——— What to eat; how to serve it. New York, Harper & brothers. $1.

Hill, *Mrs.* A. P. Hill's cook book. New York, G. W. Dillingham co., 1914. 420 p. 50 cents.

——— New southern cook book. New York, G. W. Dillingham co., 1898. 120 p. $1.

Hill, Janet McKenzie. The American cook book. New York, Sully & Kleinteich, 1914. 255 p. $1.

——— The book of entrées, including casserole and planked dishes. Boston, Little, Brown & co., 1911. 355 p. illus. $1.50.

——— Cooking for two. Boston, Little, Brown & co., 1909. 378 p. illus. $1.50.

——— Economical war time cook book. New York, Geo. Sully & co., 1918. 64 p. 50 cents.

——— Practical cooking and serving. Garden city, N. Y., Doubleday, Page & co., 1902. 712 p. $2.

——— Salads, sandwiches, and chafing-dish dainties. Boston, Little, Brown & co., 1903. 230 p. illus. $1.50.

——— War time recipes. Cincinnati, Procter & Gamble co., 1918. 96 p. Advertisement for Crisco.

Hints to housewives. New York, Mayor's food supply committee, 1917. 10 cents.

Howard, *Mrs.* B. C. Fifty years in a Maryland kitchen. 5th ed. Baltimore, Norman Remington co., 1913. 419 p. $1.50.

Howard, Margaret Willet. The practical cook book. A book of economical recipes. Boston, Ginn & co., 1917. 152 p. 72 cents.

Hughes, Mary B. Everywoman's canning book. Boston, Whitcomb & Barrows, 1918. 96 p. 75 cents.

James, Alice L. Catering for two. New York, G. P. Putnam's sons, 1902. $1.25.

——— Housekeeping for two. New York, G. P. Putnam's sons, 1909. $1.25.

Jenkinson, Eleanor L. The Ocklye cookery book. New York, Funk & Wagnalls co., 1910. 60 cents.

Keen, Adelaide. With a saucepan over the sea. Quaint and delicious recipes from kitchens of foreign countries. Boston, Little, Brown & co., 1902. 265 p.

Kellogg, Ella. Science in the kitchen. Battle Creek, Mich., Good health publishing co., 1910. 508 p. $2.

Kephart, Horace. Camp cookery. New York, Outing publishing co., 1910. 145 p. $1.

Keyzer, *Mrs.* Frances. French household cooking. New York, Charles Scribner's sons, 1915. 160 p. 60 cents.

Kirk, Alice Gitchell. Practical food economy. Boston, Little, Brown & co., 1917. 246 p. $1.25.

Kirkland, Elizabeth S. Six little cooks, or Aunt Jane's cooking class. Chicago, A. C. McClurg & co. 75 cents.

——— Six little cooks' series. 8 vols. Chicago, A. C. McClurg & co. $2.25.

Larned, Linda Hull. The new hostess of to-day. New York, Charles Scribner's sons, 1899. $1.50. rev. 1913. 428 p. $1.50.

Lincoln, Mary J. The Boston cook book. Boston, Little, Brown & co., 1904. 600 p. $2.

——— Carving and serving. Boston, Little, Brown & co. 60 cents.

——— The peerless cook book. Boston, Little, Brown & co., 1901. 182 p. 25 cents.

——— What to have for luncheon. New York, Dodge publishing co., 1904. $1.25.

——— *and* Barrows, Anna. The home science cook book. Boston, Whitcomb & Barrows, 1904. $1.

Lovewell, Caroline B., *and others.* The fireless cooker, how to make it, how to use it, and what to cook. Topeka, Kans., Home publishing co., 1908. 211 p. $1.

Mackay, Lucy G. Housekeeper's apple book. Two hundred ways of preparing the apple. Boston, Little, Brown & co., 1917. 122 p. 75 cents.

Macrae, *Mrs.* Stuart. Ingle nook cookery book. New York, Funk & Wagnalls co. 50 cents.

Mann, E. E. Practical cookery. New York, Longmans, 1899. 50 cents.

Milam, Ava B., *and others.* Camp cookery. Portland, Oreg., J. K. Gill co., 1918. 108 p. 50 cents.

Mitchell, Margaret J. Fireless cook book. Garden city, N. Y., Doubleday, Page & co., 1909. $1.25.

Mitchell, M. M. Cookery under rations. New York, Longmans, 1918. 65 p. 75 cents.

Moritz, *Mrs.,* *and* **Kahn,** *Miss.* The twentieth century cook book. New York, G. W. Dillingham co., 1898. $1.50.

Muckensturm, Louis. Louis' every woman's cook book. Boston, Caldwell, 1910. 120 p. $1.50.

——— Louis' salads and chafing dishes. Boston, Caldwell, 1906. Paper 60 cents. Cloth, $1.

Neil, Marion H. Candies and bonbons and how to make them. Philadelphia, McKay, 1913. 287 p. $1.

——— Economical cookery. Boston, Little, Brown & co. 346 p. 1918. $1.50.

——— How to cook in casserole dishes. Philadelphia, David McKay, 1912. 252 p. $1.

Nesbitt, Florence. Low cost cooking. A manual of cooking, diet, home management, and care of children for housekeepers who must conduct their homes with small expenditure of money. Chicago, American school of home economics, 1915. 127 p. 50 cents.

Oswald, Ella. German cookery for the American home. New York, Baker, 1907. $1.50.

Parloa, Maria. Camp cookery. Boston, Dana, Estes & co. 50 cents.

——— Kitchen companion. Boston, Dana, Estes & co. $2.50.

——— New cook book and marketing guide. Boston, Dana, Estes & co., 1908. $1.50.

——— Young housekeeper. Boston, Dana, Estes & co. $1.

Partridge, Pauline Dimwell, *and* **Conklin, Hester Martha.** Wheatless and meatless days. New York, D. Appleton & co., 1918. 225 p. $1.50.

Payne, A. G. Practical home cookery. New York, Cassells. 50 cents.

Pease, M. A. The home candy maker. Elgin, Ill., 1913. 37 p. $1.

Robinson, Eva R., *and* **Hammell, Helen G.** Lessons in cooking through preparation of meals. Chicago, American school of home economics, 1912. 467 p. $2.

Ronald, Mary. The century cook book. New York, Century co., 1910. 600 p. $2.

——— Luncheons. New York, Century co., 1902. illus. $1.40.

Rorer, *Mrs.* **Sarah T.** Good cooking. Garden city, N. Y., Doubleday, Page & co., 1898. 50 cents.

——— Vegetable cookery and meat substitutes. Philadelphia, Arnold, 1909. $1.50.

Sawtelle, H. L. What to do with a chafing dish. New York, G. P. Putnam's sons, 1898. $1.

Seely, *Mrs.* L. Mrs. Seely's cook-book. New York, Macmillan co., 1902. $2.

Soyer, Nicholas. Paper-bag cookery. New York, Sturgis & Walton, 1911. 130 p. 60 cents.

——— Soyer's standard cookery; a complete guide to the art of cooking dainty, varied, and economical dishes for the household. New York, Sturgis & Walton, 1912. 436 p. $1.50.

Spring, Helen M. Individual recipes. Philadelphia, John G. Winton co., 1916. 81 p. 25 cents net.

Stockbridge, Bertha E. I. The liberty cook book. *See* Food Conservation.

Sugg, Marie Jenny. The art of cooking by gas. New York, Cassel. illus. 75 cents.

Telford, Emma Paddock. Good housekeeper's cook book. New York, Cupples & Leon co., 1914. 256 p. $1.

——— Standard paper-bag cookery. New York, Cupples & Leon co. 50 cents.

Thudichum, John L. W. Cookery; its art and practice. New York, Warne 1905. $1.40.

Wade, *Mrs.* Mary L. Book of corn cookery. One hundred and fifty recipes showing how to use this nutritious cereal and live cheaply and well. Chicago, McClurg, 1917. 105 p. 75 cents.

Waterman, Amy H. (Lane). A little candy book for a little girl. Boston. Page co., 1918. 144 p. 85 cents.

Whitney, *Mrs.* A. D. T. Just how; A key to the cook-books. Boston, Houghton Mifflin co., 1906. $1.

Wright, Helen S. The New England cook book. New York, Duffield & co., 1912. 327 p. $1.50.

——— The new home cook book. Chicago, A. C. McClurg. $1.

Yates, Lucy H. The gardener and the cook. New York, McBride, Nast & co. 1913. 259 p. $1.25.

2. FOOD CONSERVATION.

[During the war emergency many books and pamphlets on the subject of food conservation of interest to students of food and nutrition were published. Some of these were of temporary value. Others may prove of permanent interest. All that have been received at the Bureau of Education are recorded here. Titles included in this list may also appear under the general classification in those cases in which they offer constructive aid to teachers.]

Bevier, Isabel. Practical suggestions for food conservation. Urbana, Ill. University of Illinois. (War committee.)

Boston. Board of education. Food thrift. Suggestions, menus, recipes, and substitutions.

——— **Public library.** A selected list of books on domestic production and preservation of food.

Bradley, Alice. Lessons in food values and economical menus. Boston, Miss Farmer's school of cookery, 1917. 28 p. 25 cents.

——— Wheatless and meatless menus and recipes. Boston, Miss Farmer's school of cookery, 1918. 85 p. 25 cents.

Brooklyn, N. Y. Public library. "Doing your bit" at home. Some library books that will help you.

California. State council of defense. Shasta county committee. Official bulletin issued by the Shasta county committee of the Council of national and state defense. Containing menus, recipes and suggestions for the use of those materials that will conserve food.

Campbell, Iva R. Practical food economies. Chicago, Row, Peterson & co., 1919. 172 p.

Chicago, Ill. Public library. "The high cost of living." Included in Book bulletin, March, 1917.

Columbia university. Teachers college. Corn calories for conservation. Recipes and menus for a week. By Day Monroe *and others.* (Technical education. Bulletin series no 37.) 25 cents.

——— ——— Food for school boys and girls. By Mary S. Rose. 16 p. (Technical education. Bulletin series no. 23.) 10 cents.

——— ——— Some food facts to help the housewife in feeding the family. by Mary S. Rose. 8 p. (Technical education. Bulletin series no. 27.) 5 cents.

——— ——— Tested international recipes. By May B. Van Arsdale *and others.* 20 p. (Technical education. Bulletin series no. 36.) 20 cents.

——— ——— War breads. Prepared by the School of practical arts. (Technical education. Bulletin series no. 38.) 6 cents.

——— ——— Some sugar saving sweets for every day. By May B. Van Ardsale *and* Day Monroe. 20 p. (Technical education. Bulletin series no. 35.) 20 cents.

Doddridge, Amelia. Liberty recipes. Cincinnati, Stewart & Kidd co., 1918. 106 p. $1.25.

Drexel Institute, Philadelphia, Pa. Timely suggestions and economical recipes. Registrar's office. 10 cents; postage, 2 cents.

Farmer, A. H., *and* **Huntington, Janet R.** Food problems. Boston, Ginn & co., 1918. 90 p. 27 cents.

Franks, Thetta Q. Daily menus for war service. New York, Putnam, 1918. $5.

Garland school of homemaking, Boston, Mass. Food economies. Bulletins, I–IV. Leaflets.

Gibbs, Winifred Stuart. Forty ways of reducing food bills. Rochester, N. Y., Extension department, Mechanics institute. 10 cents.

Gillett, Lucy H. Food allowances for healthy children. New York, Association for improving the condition of the poor, 1917.

——— Food primer for the home. New York, Bureau of food supply, A. I. C. P., 1918. 20 cents. By mail, 25 cents.

Gillmore, Maria McIlvaine. Economy cook book. New York, Dutton, 1918. 215 p. $1.

Goudiss, C. H., *and* Goudiss, *Mrs.* A. M. Foods that will win the war. New York World syndicate co., 1918. 123 p. 50 cents.

Greer, Carlotta C. Food and victory. New York, Allyn & Bacon, 1918. 62 p. 40 cents.

Harlan, Helen H. Wheatless-meatless meals. Chicago, American school of home economics. 1918. 47 p. 10 cents.

Hill, Janet McK. Economical war time cook book. New York, Geo. Sully & co., 1918. 64 p. 50 cents.

Hiller, *Mrs.* Elizabeth O. The corn book. Chicago, R. F. Volland co., 1918. 129 p. $1.

Hughes, Dora M. Thrift in the household. Boston, Lothrop, Lee & Shepard, 1918. 228 p. $1.25.

Illinois. State council of defense. What to eat and how to cook it. Chicago, 1918. 5 cents; by mail 10 cents.

——— University of Illinois. War bread recipes.

Indiana. State board of education. War service textbook for Indiana high schools.

Kellogg, Vernon. Fighting starvation in Belgium. Garden city, N. Y., Doubleday, Page & co., 1918. 219 p. $1.25.

——— *and* Taylor, Alonzo E. The food problem. New York, Macmillan, 1917. 213 p. $1.25.

Kentucky. Council of national defense. Woman's committee, Louisville. War cook book. By Mary E. Sweeny *and* Linda B. Purnell. 108 p.

Lauck, W. Jett. Cost of living and the war. Cleveland, Ohio, Doyle & Waltz publishing co., 1918. 196 p. $1.50.

Life extension institute. New York city. Food. 10 cents.

Lusk, Graham. Food in war time. Philadelphia, W. B. Saunders co. 1918. 46 p. 50 cents.

Maylander, Alfred. Food situation in Central Europe, 1917. Washington, Government printing office, 1917. (U. S. Department of labor. Bureau of labor statistics. Bulletin no. 242.)

Milwaukee-Downer college. Suggestions for menu planning to help the housewife meet the present emergency. Milwaukee, Wis. 15 cents.

National conference of social work, Chicago, Ill. A community kitchen in a neighborhood house. Chicago, 1918. (Pamphlet 146.) 5 cents.

——— Feeding the family; a problem and a method for social workers in war time. Chicago, 1918. (Pamphlet 166.) 5 cents.

National emergency food garden commission, Washington, D. C. Manual for home storage, pickling, fermentation and salting vegetables. Postage 2 cents.

National war garden commission, Washington, D. C. Home canning and drying of vegetables and fruits. Part I, Home canning. Part II. Home drying. Washington, 1918. 31 p.

Nettleton, Bertha E. One-hundred portion war time recipes. Philadelphia. Lippincott, 1918. 43 p. $1.

New York city. Food aid committee. Tested war time recipes.

———— ———— Sweets that save sugar.

———— **Food supply committee (Mayor Mitchel's).** Hints to housewives. New York, 1917. 10 cents.

Nims, Marion R. Women in the war. A bibliography. Washington, News department of the Woman's committee, Council of national defense, 1918. 77 p.

O'Brien, Charles. Food preparedness for the United States. Boston, Little, Brown & co., 1917. 118 p. 50 cents.

Ohio. Council of national defense, Columbus. Agricultural division. Utilization of food. Recipes.

Our country's call to service. New York, Scott Foresman & co., 1918. 128 p. 12 cents.

Partridge, Pauline D., *and* **Conklin, Hester M.** Wheatless and meatless days. New York, Appleton, 1918, 234 p. $1.50.

Purdy, Mabel Duton. Food and freedom. New York, Harper & bros., 1918. 252 p. $1.

Rickard, Helen, *comp.* Victory breads. Fifty bread recipes. Fifty practical suggestions. Fifty economical dishes. Denver, Colo., Mrs. Forbes Rickard, 1918. 49 p. 50 cents.

Compiled for the American Red Cross.

Rose, Mary Swartz. Everyday foods in war time. New York, Macmillan, 1918. 117 p. 80 cents.

Schreiner, George A. The iron ration; three years in warring central Europe. New York, Harpers, 1918. 385 p. $2.

Smith, J. Russell. Food and the war. Ten lessons for the American school. Harrisburg, Pa., Department of food supply. Committee of public safety.

South Dakota. Federal food administration. The timely cook book. 1918.

Stockbridge, Bertha E. L. The liberty cook book. New York, Appleton, 1918. 509 p. $2.

Stout institute, Menomonie, Wis. Conservation of foods.

Taylor, Alonzo E. War bread. New York, Macmillan, 1918. 99 p. 60 cents.

Texas. Department of education. Fifteen lessons in food conservation. December 1, 1917. (Bulletin 71.)

United States. Department of agriculture. Farmers' bulletins:

807. Bread and bread making.
808. How to select foods—I. What the body needs.
817. How to select foods—II. Cereal foods.
824. How to select foods—III. Foods rich in protein.
839. Home canning by the one-period cold-pack method.
841. Drying fruits and vegetable in the home.
853. Home canning of fruits and vegetables taught to canning clubs' members in southern States.
871. Fresh fruits and vegetables as conservers of other staple foods.
881. Salting, fermentation, and pickling of vegetables.
900. Home-made fruit butters.
916. A successful community drying plant.
955. Use of wheat flour substitutes in bread making.
984. Farm and home drying of fruits and vegetables.

Food leaflets: 1. Start the day right. 2. Do you know corn meal? 3. A whole dinner in one dish. 4. Choose your food wisely. 5. Make a little meat go a long way. 6. Do you know oatmeal? 7. Food for your children. 8. Instead of meat. 9. Vegetables for winter. 10. Plenty of potatoes. 11. Milk the best food we have. 12. Save fuel when you cook. 13. Let the fireless cooker help you conquer. 14. Save sugar; use other sweets. 15. Dry peas and beans. 16. Use fat carefully. 17. Use more fish. 18. Rice. One of our most useful cereals. 19. Hominy. 20. Wheatless breads and cakes; Save the wheat for victory.

Library leaflets: No. 1. Raise chickens. No. 2. Raise pigs. No. 3. Raise sheep. No. 4. Bread and cereals. No. 5. Vegetables and fruits. No. 6. Wheat and meat substitutes. No. 7. Fats and sugar.

United States. Department of agriculture. Office of the secretary. Circulars:

108. Use potatoes to save wheat.
109. Cottage cheese dishes.
110. Use peanut flour to save wheat.
111. Use barley—save wheat.
117. Use corn meal and corn flour to save wheat.
118. Use oats to save wheat.
119. Use rice flour to save wheat.

—— **Department of the interior. Bureau of education.** Home economics circulars. Teaching home economics under present economic conditions:

No. 6. A course in food economies for the housekeeper.
No. 7. The effect of war conditions on clothing and textile courses.

Home economics letters. Series relating to war service:

19. What the home economics teacher can do.
20. Economy in food courses.
21. High school food economies in practice.
22. A brief course in food economy for colleges and normal schools.
23. Red Cross work for the household arts teacher.
24. A course in food economies for the housekeeper. (Revised July 20, 1917.)
25. Service to be rendered by College and university home economics department.
26. Bulletins on food conservation.
27. Food conservation—periodical literature.
29. Periodical literature on food conservation. (Supplementary.)
31. War-time menus for the school lunch.
32. Periodical literature on food conservation. (Supplementary.)
33. Bulletins on food conservation. (Supplementary.)
34. Alterations in home economics courses in state normal schools due to war conditions.
35. Periodical literature on food conservation. (Supplementary.)
36. Some recent books relating to women's war work for food economy.

—— **Food administration, Washington, D. C.** Food conservation. Bibliography. References and sources of information on production, statistics, distribution, conservation and methods of control of food supplies. February, 1918.

—— —— The day's food in war and peace.

United States. Food administration, Washington, D. C. Food and the war. Boston, Houghton Mifflin co., 1918. 80 cents.

———— Food guide for war service at home. New York, Charles Scribner's sons, 1918. 25 cents.

———— Food saving and sharing. Garden city, N. Y., Doubleday, Page & co., 1918. 102 p. 28 cents.

———— War economy in food, with suggestions and recipes. Washington, D. C.

——— **Library of congress. Division of bibliography.** List of references on the conservation, production and economic use of foods, June, 1917.

———— The United States at war. Organization and literature. June, 1917.

University of Buffalo. Food preparedness. Bulletin. Secretary of the faculty of arts and science, Townsend Hall, University of Buffalo, Buffalo, N. Y.

Van Hise, Charles R. Conservation and regulation in the United States.
Part 1. Published by the U. S. Food administration. Washington, 1917. 63 p.
Part 2. Published by the University of Wisconsin. Madison, Wis., 1918. 65 p.–233 p.

Vulte, Hermann T. Conservation of fats. Emergency committee, American home economics association. New York city section, 19 West 44 st.

Washington. State college. Food economy for the housewife: Bibliography. Pullman, 1917. 34 p. (Library bulletin. Home economics series no. 1.) 25 cents.

————— Pullman, 1918. 59 p. (Library bulletin. Home economics series no. 2.) 25 cents.

Wellman, Mabel Thacher. Economy in foods. A supplement to food study; a textbook in home economics. Boston, Little, Brown & co., 1918. 36 p. 30 cents.

Williams, Anna W., *and* **Gray, Cora E.** Fats and oils in cookery. Urbana, Ill., University of Illinois, 1917.

Wisconsin. College of agriculture. Extension service. What shall we eat on wheatless and meatless days. 47 p. (Circular 106, May, 1918.)

——— **Department of education.** Suggestive outline of work on food conservation for home economics teachers. p. 24. Madison, 1918.

——— **State normal school, Stevens Point.** Food conservation in the household. (Bulletin no. 61.)

Wood, Thomas B. National food supply in peace and war. New York, Putnam, 1917. 43 p. 25 cents.

——— *and* **Hopkins, Frederick G.** Food economy in war time. New York, Putnam, 1915. 35 p. 15 cents.

The world's food. Annals of the American academy of political and social science, vol. 74, no. 163, November, 1917.

Wyoming. University of Wyoming, Laramie. War ideas to make you healthy, wealthy, and wise. Compiled by the seniors and juniors of the Department of home economics, 95 p.

Zavalla, Justo P. The canning of fruits and vegetables. New York, John Wiley & sons, 1916. 214 p. $2.50 net.

4. FOOD STUDY.

(*See also* Nutrition and Dietetics.)

Armsby, Henry P. The conservation of food energy. Philadelphia, W. B. Saunders co., 1918. 65 p. 75 cents.

Atkinson, Thomas G. Baking powder a healthful, convenient leavening agent. Chicago, 1915. 58 p. 50 cents.

Bailey, E. H. S. Source, chemistry, and properties of food. Philadelphia, P. Blakiston's son & co., 1914. 517 p. $1.60.

Bayliss, William M. The physiology of food and economy in diet. New York, Longmans, 1917. 107 p. 65 cents.

Bessens, Josephine L. Meals for five or six dollars a week. Elgin, Ill., David Cook publishing co., 1916. 28 p. (Mothers' magazine. Domestic science series.) 25 cents.

Birge, William S. True food values and their low costs. New York, Sully & Kleinteich, 1916. 218 p. 50 cents.

Brewster, Edwin T., *and* **Brewster,** *Mrs.* **Lilian E.** Nutrition of a household. Boston, Houghton Mifflin co., 1915. 208 p. $1.

Buckland, Annie W. Our viands, whence they come and how they are cooked with a bundle of old recipes from cookery books of the last century. London, Ward & Downey, 1893. 308 p.

Carpenter, F. O. Foods and their uses. New York, Charles Scribner's sons, 1907. 60 cents.

Carpenter, Frank G. How the world is fed. Geographical reader. Chicago, American book co., 1907. 60 cents.

Chamberlain, James F. How we are fed. Geographical reader. New York, Macmillan, 1903. 214 p. 40 cents.

Child, Theodore. Delicate feasting. New York, Harpers, 1890. 214 p. $1.25.

Chisholm, George G. Handbook of commercial geography. New York, Longmans, Green & co., 1911. 666 p. $4.80.

Church, Arthur H. Food. Some accounts of its sources, constituents, and uses. London, Chapman & Hall, 1876. 224 p.

Congdon, Leon A. Fight for food. Philadelphia, J. B. Lippincott co., 1916. 207 p. $1.25.

Crissey, Forrest. The story of foods. Chicago, Rand, McNally & co., 1917. 543 p. $1.25.

Dondlinger, Peter T. The book of wheat. New York, Orange Judd, 1908. $2.

Edelmann, Richard. Textbook of meat hygiene. Revised for America by J. R. Mohler and Adolph Eichhorn. New York, Lea & Febiger, 1917. 452 p. $4.50.

Edgar, William C. Story of a grain of wheat. New York, Appleton, 1903. $1.

Ellwanger, George H. Pleasures of the table. Garden city, N. Y., Doubleday, Page, & co., 1902. 477 p.
Historical with bibliography.

Robinson, Edward V. D. Commercial geography. Chicago, Rand, 1910. 455 p. $1.25.

Rose, Mary Swartz. Every-day foods in war time. New York, Macmillan. 1918. 117 p. 80 cents.

Rosenau, M. J. The milk question. Boston, Houghton Mifflin co., 1912. 310 p. $2.

Savage, William G. Milk and the public health. New York, Macmillan, 1912. 459 p. $3.25.

Sherman, Henry Clapp, *and* **Gillett, Lucy H.** Adequacy and economy of some city dietaries. New York, Association for improving the condition of the poor, 1917. 32 p. (Publication No. 121.) 25 cents.

Smith, George C. What to eat and why. Philadelphia, Saunders, 1911. 311 p. $2.50.

Smith, Joseph R. Industrial and commercial geography. New York, Holt, 1913. 914 p. $4.

Spargo, John. Common sense of the milk question. New York, Macmillan, 1908. $1.50.

Stocking, William A. Manual of milk products. New York, Macmillan, 1917. 578 p. $2.

Taylor, Alonzo E. War bread. New York, Macmillan, 1918. 99 p. 60 cents.

Thom, Charles, *and* **Fisk, Walter W.** The book of cheese. New York, Macmillan, 1918. 392 p. $1.90.

Thompson, William H. Food values. With a note on the conservation of Irish food supplies. Dublin, Dollard press, 1915.

Vulté, Herman T., *and* **Vanderbilt, Sadie B.** Food industries. An elementary textbook on the production and manufacture of staple foods, designed for use in high schools and colleges. New York, Published by the authors, 525 W. 120 st., 1914. 309 p. $1.75.

Ward, Artemas, *comp.* The grocer's encyclopedia. New York, A. Ward, 50 Union square, 1911. 748 p. $10.

Wiley, Harvey W. Foods and their adulterations. Rev. ed. Philadelphia, P. Blakiston's son & co., 1917. 646 p. illus. $4.

——— 1001 tests of foods, beverages, and toilet accessories, good and otherwise; why they are so. New York, Hearst's international library, 1914. 249 p. $1.25. Rev. ed., 1916. 344 p. 50 cents.

Williams, William M. The chemistry of cookery. New York, D. Appleton & co., 1902. 328 p. $1.50.

Wing, H. H. Milk and its products. A treatise upon the nature and qualities of dairy milk and the manufacture of butter and cheese. New York, Macmillan, 1913. 433 p. $1.50.

Winslow, Kenelm. The production and handling of clean milk. New York, W. R. Jenkins co., 1909. 357 p. $3.25.

inton, Andrew L. A course in food analysis. New York, John Wiley & sons, 1917. 252 p. $1.50.

Wood, Thomas B. National food supply in peace and war. New York, Putnam, 1917. 43 p. 25 cents.

——— The story of a loaf of bread. New York, G. P. Putnam's sons, 1913. 140 p. 40 cents net. Leather $1 net.

——— *and* **Hopkins, Frederick G.** Food economy in war time. New York, Putnam, 1915. 25 p. 15 cents.

Woodman, Alpheus G. Air, water, and food, from a sanitary standpoint. New York, Wiley, 1914. 248 p. $2 net.

5. INFANT FEEDING.

(*See also* The Child.)

Abt, Isaac. The baby's food. Philadelphia, W. B. Saunders & co., 1917. 143 p. $1.25.

Chapin, Henry D. Theory and practice of infant feeding. New York, William Wood & co., 1909. $2.25.

Fischer, Louis. Infant feeding in its relation to health and disease. Philadelphia, Davis, 1903. $2.

Gillett, Lucy H. Survey of evidence regarding food allowances for healthy children. *See* School Lunches.

Grulee, C. G. Infant feeding. Philadelphia, W. B. Saunders co., 1914. 314 p. $3.

Hogan, Louise E. Children's diet in home and school with classified recipes and menus. Garden city, N. Y., Doubleday, Page & co., 1910. 75 cents.

——— How to feed children. Philadelphia, J. B. Lippincott co., 1909. $1.

Holt, L. Emmett. The care and feeding of children. New York, D. Appleton & co., 1912. 212 p. 75 cents.

King, F. Truby. Feeding and care of baby. New York, Macmillan, 1914. 161 p. Paper, 35 cents.

Morse, John Lovett. Care and feeding of children. Cambridge, Mass., Harvard university press, 1914. 53 p. (Harvard health talks.) 50 cents.

——— *and* **Talbot, Fritz Bradley.** Diseases of nutrition and infant feeding. New York, Macmillan, 1915. 346 p. $2.50.

Rose, Mary D. S. Feeding of young children. New York, Teachers college, 1911. 10 p. (Technical education. Bulletin no. 3.) 10 cents.

——— Food for school boys and girls. New York, Teachers college, 1914. 15 p. (Technical education. Bulletin no. 23.) 10 cents.

Royster, Lawrence T. A handbook of infant feeding. St. Louis, C. V. Mosby co., 1916. 144 p. $1.25.

Winters, Joseph E. Feeding of infants. New York, E. P. Dutton & co., 1901. 47 p. 50 cents.

6. INSTITUTIONAL FEEDING.

(*See also* School Feeding.)

American Red Cross. Department of nursing. Bureau of dietitian service. Emergency cooking for large groups of people. Washington, A. R. C. 708 p. (Instructors' manual.)

Oppenheimer, Rebecca W. Diabetic cookery. New York, Dutton, 1918. 156 p. $2.

Pattee, Alida F. Practical dietetics: with reference to diet in disease. Mt. Vernon, N. Y., A. F. Pattee, 1910. 527 p. $1.50.

Perry, Maude A. Essentials of dietetics for nurses. St. Louis, C. V. Mosby, co., 1918. 159 p. $1.25.

Pope, A. E., *and* **Carpenter, Mary L.** Essentials of dietetics in health and disease. A textbook for nurses, and a practical dietary guide for the household. New York, G. P. Putnam's sons, 1908. 261 p. $1.

Rorer, *Mrs.* **S. T.** Mrs. Rorer's diet for the sick. Philadelphia, Jacobs, 1914. $2.

Sachse, Helena V. How to cook for the sick and convalescent. Arranged for the physician, trained nurse and home use. Philadelphia, J. B. Lippincott co., 1910. 337 p. $1.25.

Strouse, Solomon, *and* **Perry, Maude.** Food for the sick. Philadelphia, Saunders, 1917. 270 p. $1.50.

8. RURAL SCHOOL LUNCHES.

(*See also* School Feeding.)

California. State normal school of San Diego. A manual of home economics for the rural school.

Idaho. University of Idaho. Agricultural extension department. Rural school lunches. 1913–14.

Illinois. University of Illinois. The rural school lunch.

Kentucky. Western Kentucky state normal school, Bowling Green. Domestic science in rural schools. By Iva Scott. (Bulletin no. 1.)

Maine. Department of education. School lunches.

Michigan. Michigan agricultural college, East Lansing. The school lunch box. (Extension course. Notes No. 8. Home economics.)

Minnesota. University of Minnesota, St. Paul. Teaching domestic science in rural schools. 1911.

Nebraska. University of Nebraska, Lincoln. Lunches for the rural school. August 20, 1915. (Extension bulletin no. 32.)

New York. Cornell university, Ithaca. The box lunch.

Ohio. State university, Columbus, Ohio. The teaching of home economics in rural schools in connection with school lunches and lesson 1 to 20. (School lunches). (Extension circular.)

Oregon. Oregon agricultural college, Corvallis. The box lunch. The school luncheon. 1913.

Richards, Ellen Henrietta. Good luncheons for rural schools without a kitchen. Boston, Whitcomb & Barrows, 1906. 12 p.

Saskatchewan. Department of education, Regina. The rural school luncheon. (Household science circular no. 1.)

Foster, Oliver Hyde. Cookery for little girls (juvenile). New York, Duffield & co. $1 net.

——— Housekeeping for little girls (juvenile). New York, Duffield & co. $1 net.

Frich, Lilla. Basic principles of domestic science; consisting of a course of seventy-two illustrated lessons. Minneapolis public schools. Muncie, Ind., Muncie normal institute, 1912. 200 p. $1.15.

——— Cooking. Book 1. 1914. 279 p. Book 2. 1915. 275 p. Indianapolis, Ind., Industrial book and equipment co. $1 each.

Fryer, Jane E. The Mary Frances cook book, or adventures among the kitchen people. Philadelphia, J. C. Winston co. $1.20.
Juvenile.

Gibbs, W. S. Elements of domestic science. Philadelphia, Lippincott co., 1914. $1.

——— Lessons in the proper feeding of the family. New York, Association for improving the condition of the poor, 1911. 53 p. 25 cents.

Greer, Carlotta C. A textbook of cooking for secondary schools. Boston, Allyn & Bacon, 1915. 431 p. $1.25.

Greer, Edith. Food; what it is and does. New York, Ginn & co., 1915. 251 p. $1.10.

Hullinger, M. Series of lessons in cooking and household management. Springfield, Ohio, Myrtle Hullinger, 1916. $1.25.

Johnson, Gertrude T. Domestic science; a text in cooking and syllabus in serving. Kansas city, Published by the author, 1912. 153 p. 75 cents.

Jones, Mary Chandler. Lessons in elementary cooking. Boston, Boston cooking school magazine co., 1915. 266 p. $1.

Jones, R. Henry. Experimental domestic science. Philadelphia, Lippincott co., 1914. 235 p. 80 cents.

Josserand, Beth W. Food preparation. A laboratory guide and note book for high school classes in domestic science. Peoria, Manual arts press, 1917. 2 vols. $1.25 each.

Kinne, Helen, *and* **Cooley, Anna M.** Food and health. An elementary textbook of home making. New York, Macmillan, 1916. 312 p. 65 cents.

——— Foods and household management. New York, Macmillan, 1915. 401 p. $1.10.

——— The home and the family. An elementary textbook of home-making. New York, Macmillan, 1917. 292 p. 80 cents.

Kittredge, Mabel H. The home and its management. A handbook in homemaking with three hundred inexpensive cooking receipts. New York, Century co., 1917. 385 p. $1.50.

——— Housekeeping notes. How to furnish and keep a house in a tenement flat. Boston, Whitcomb & Barrows, 1911. 97 p. Cloth, 80 cents. Paper, 60 cents.

——— Practical homemaking. New York, Century co., 1914. 153 p. 60 cents.

——— A second course in homemaking; with two hundred inexpensive cooking receipts. New York, Century co., 1915. 249 p. 80 cents.

Lincoln, Mary J. The school kitchen textbook. Lessons in cooking and domestic science for the use of elementary schools. Boston, Little, Brown & co., 1915. 308 p. School edition. (Boston school kitchen textbook, 1887.) 60 cents.

Longman's household science readers. Book 1. For the third year of school. New York, Longmans, Green & co., 1901. 129 p. 42 cents.

Matteson, Emma B., *and* **Newlands, Ethel M.** A laboratory manual of food and cookery, with experiments and recipes. New York, Macmillan, 1916. 325 p. $1.50.

Metcalf, Martha L. Students' manual in household arts. Indianapolis, Ind., Industrial education co., 1915. 299 p. 95 cents.

Morris, Josephine. Household science and arts for elementary schools. New York, American book co., 1912. 248 p. 60 cents.

Osborne, Lena. Food and clothing. Row, Peterson & co., 1914. 285 p. 60 cents.

Pirie, Emma E. The science of home making. A textbook in home economics. Chicago, Scott, Foresman & co., 1915. 404 p. 90 cents.

Rose, Mary S. A laboratory handbook of dietetics. New York, Macmillan, 1914. 127 p. $1.10.

Rudd, Fay Morgan, *and* **Kayser, Francesca E.** Cooking and serving outline. Birmingham, Ala., Tenn. Coal, iron & railroad co., 1917. 115 p.

Stewart, Frances E. Lessons in cookery. Book 1. Food economy. Chicago, Rand, McNally & co., 1918. 250 p. $1.25.

United States. Food administration. The day's food in war and peace. Pamphlet. 108 p.

——— Food and the war. A textbook for college classes. Boston, Houghton Mifflin co., 1918. 379 p. 80 cents.

——— Food guide for war service at home. New York, Charles Scribner's sons, 1918. 67 p. 25 cents.

——— Food saving and sharing. Garden city, N. Y., Doubleday, Page & co., 1918. 102 p. 24 cents.

Wardall, Ruth A., *and* **White, Edna N.** A study of foods. (For eighth grade and high school use.) Boston, Ginn & co., 1914. 174 p. 70 cents.

Wellman, Mabel Thatcher. Economy in foods. A supplement to food study. A textbook in home economics. Boston, Little, Brown & co., 1918. 36 p. 30 cents.

——— Food study. A textbook of home economics for high schools. Boston, Little, Brown & co., 1917. 324 p. $1.10.

Williams, M. E., *and* **Fisher, K. R.** Elements of the theory and practice of cookery. A textbook of domestic science for use in the schools. New ed., rev. and enl. New York, Macmillan, 1916. 405 p. $1.

Wilson, L. L. W. Domestic science manual. New York, Macmillan. $1.

——— Domestic science reader. New York, Macmillan. 60 cents.

Worcester domestic science school. One year course laboratory cook book. Worcester, Mass., 1914. $2.50.

X. THE HOUSE AND HOUSEHOLD ACTIVITIES.

1. ADMINISTRATION.

(*See* Management of the House.)

2. CARE OF THE HOUSE.

(*See* Housewifery and Management of the House.)

3. CONSTRUCTION OF THE HOUSE.

Allingham, H. Cottage homes of England. New York, Longmans, Green & co., 1909. $7.

Bevier, Isabel. The house; its plan, decoration, and care. Chicago, American school of home economics, 1907. 224 p. $1.50.

Brown, Henry Collins. Book of housebuilding and decoration. Garden city, N. Y., Doubleday, Page & co., 1912. 200 p. $3.

Butterfield, W. H., *and* **Tuttle, H. W.** A book of house plans. New York, McBride, Nast & co., 1912. 153 p. $2.

Carpenter, Frank G. How the world is housed. Geographical reader. Chicago, American book co., 1911. 60 cents.

Chamberlain, James F. How we are sheltered. Geographical reader. New York, Macmillan, 1906. 40 cents.

Coleman, Oliver. The book of 100 houses. H. S. Stone, 1901. $1.60.

——— Successful houses. New York, Duffield & co., 1899. $1.35.

Davenport, *Mrs.* **Emma J.** Possibilities of the country house, Urbana, Ill. University of Illinois, 1910. 12 p.

DeForest, Robert W., *and* **Veillers, Laurence,** *editors.* The tenement house problem, including a report of the New York state tenement house commission of 1900. 2 vols. New York, Macmillan, 1903. $6.

Desmond, Harry M., *and* **Frohne, Harry W.** Building a home: a book of fundamental advice for the layman about to build. New York, Baker, 1906. $1.80 net.

Dodd, Helen. The healthful farmhouse by a farmer's wife. Boston, Whitcomb & Barrows, 1911. 70 p. 60 cents.

French, Lillie Hamilton. The house dignified. New York, Putnam, 1908. $5.

Galton, *Sir* **D.** Construction of healthy dwellings. New York, Oxford university press. $2.75.

Gardner, E. C. The house that Jill built. Boston, Old corner book store. 1902. $1.

Goodnow, Ruby R., *and* **Adams, Rayne.** The honest house arranged especially in reference to small house design. New York, Century co., 1914. 206 p. $3.

Green, Lillian B. Effective small home. New York, McBride, 1917. 187 p. $1.50.

Hodgson, Frederick T. Modern housebuilding. Chicago, F. J. Drake & co. 50 cents.

Hooper, Charles E. The country house; practical manual of planning and construction. 1913. 330 p. $1.50. Garden city, N. Y., Doubleday, Page & co., 1906, $3.

——— Reclaiming the old house. New York, McBride, Nast & co., 1913. 162 p. $2.

Housing and town planning. Philadelphia, American academy of political and social science, 1914. 270 p. $1.50. Paper, $1.

Housing problems in America. 2d and 3rd National conference on housing. Proceedings. Philadelphia, 1912. New York, National housing association, 1913–14. 2 vols. $2 each.

Keane, A. H. The world's peoples. New York, Putnam's sons, 1908. 434 p. $2 net.

Keys, C. M. How to finance the building of a little home. Philadelphia, Ladies home journal, 1913. 19 p.

Koester, Frank. Electricity for the farm and home. New York, Sturgis & Walton co., 1913. 279 p. $1.

Moore, Francis C. How to build a home. Garden city, N. Y., Doubleday, Page & co., 1907. $1.

Northend, Mary H. Colonial homes and their furnishings. Boston, Little, Brown & co., 1912. 252 p. $5.

——— Remodeled farm houses. Boston, Little, Brown & co., 1917. 264 p. $2.25. 1915 edition, $5.

Osborne, C. F. The family house. Philadelphia, Penn pub. co., 1910. 236 p. $1.

Paris, William F. Decorative elements in architecture. New York, Lane, 1917. 152 p. $5.

Parsons, S., *jr.* How to plan the home grounds. Garden city, N. Y., Doubleday, Page & co., 1898. $1.

Richards, Ellen H. The cost of shelter. New York, John Wiley & sons, 1905. 136 p. $1.

Robertson, Lionel, *and* O'Donnell, T. C. The healthful house. Battle Creek, Mich., Good health publishing co., 1917. 191 p. $2.

Sabin, A. H. House painting, glazing, paper hanging, and white washing. New York, John Wiley & sons, 1908. 121 p. $1.

Saylor, Henry H. Architectural styles for country houses. New York, McBride & co., 1912. 124 p. $2.50.

——— Bungalows. New York, McBride & co., 1913. $2.50.

——— Distinctive homes of moderate cost. New York, McBride & co., 1911. 174 p. $2.

——— The home builder's handbook. Garden city, N. Y., Doubleday, Page & co. illus. 75 cents.

——— Inexpensive homes of individuality. New York, McBride & co. 75 cents.

Daniels, F. H. Furnishing a modest home. Worcester, Mass., Davis press, 1908. 114 p. $1.

De Wolfe, Elsie. The house in good taste. New York, Century co., 1913. 322 p. $2.50.

Dillaway, Theodore M. Decoration of the school and home. Springfield, Mass., Milton Bradley co. $2.

Dyer, Walter A. Handbook of furniture styles. New York, Century co., 1918. 155 p. $1.50.

Eberlein, Harold D. Making and furnishing outdoor rooms and porches. New York, McBride, 1913. 61 p. 50 cents.

——— Making walls and ceilings. New York, McBride, 1915. 59 p. 50 cents.

——— *and* **McClure, Abbot.** The practical book of early American arts and crafts (with a chapter on early lace by Mable Foster Bainbridge). Philadelphia, Lippincott, 1916. 39 p. $6.

——— ——— Practical book of period furniture. Philadelphia, Lippincott, 1914. 371 p. $6.

Elder, Duncan J. H. Country cottages and week end homes. 1907. $3.50.

——— The house beautiful and useful. New York, John Lane co., 1911. $3.50.

Emburg, Aymar, *jr*. Dutch colonial house. New York, McBride, 1912. $2.50.

Emery, M. S. How to enjoy pictures. Chicago, Prang educational co., 1898. $1.50.

French, Lillie Hamilton. Homes and their decoration. New York, Dodd, Mead & co., 1903. $3.

——— The home dignified. New York, Putnam, 1908. $5.

Hasluck, Paul N. Cassell's house decoration. New York, Funk, Wagnalls co., 1909. $3.

Hayden, Arthur. Chats on old furniture. New York, Stokes, 1909. 283 p. $2.

Herts, Benjamin R. Decoration and furnishing of apartments. New York, Putnam, 1915. 190 p. $3.75.

Hunter, George L. Home furnishings. New York, John Lane co., 1913. 231 p. $2.

——— Inside the house that Jack built. The story, told in conversation, of how two homes were built. New York, John Lane co., 1914. 203. p. $1.35 net.

——— Tapestries. Their origin, history and renaissance. New York, John Lane co., 1912. $5.

Jackson, Allen W. The half timber house. New York, McBride, 1912. 115 p. $2.50.

Johnson, William. Inside one hundred homes. Garden city, N. Y., Doubleday, Page & co., 1898. 50 cents.

Kellogg, Alice M. Home furnishings; practical and artistic. New York, Frederick A. Stokes, 1905. illus. $1.60.

Kelly, A. A. Expert interior decoration. Malvern, Pa., A. A. Kelly, 1917. 188 p. $2.

King, Charles A. Inside finishing. New York, American book co., 1912. 227 p. 80 cents.

Langton, *Mrs.* **M. B.** How to know oriental rugs. New York, D. Appleton & co., 1904. $2.

Lewis, George G. Practical book of oriental rugs. Philadelphia, Lippincott, 1913. 375 p. $5.

Lockwood, Luke V. Colonial furniture in America. New York, Scribner, 1901. $7.50. New ed. 2 vols. illus. 1913. $25.

McClure, Abbot. Making built-in furniture. New York, McBride, 1914. 52 p. 50 cents.

——— Making floors. New York, McBride, 1915. 64 p. 50 cents.

——— *and* **Eberlein, Harold D.** Home furnishing and decoration. New York, McBride, 1914. 285 p. $1.50.

Macquoid, Percy. History of English furniture. New York, Putnam, 1904–08. 4 vols., each $15; 20 parts, each $2.50.

Moore, *Mrs.* **N. H.** Old furniture book. New York, Stokes, 1903. $2.15.

Morse, Frances C. Furniture of the olden time. New York, Macmillan, 1902. $3.

Mumford, J. K. Oriental rugs. New York, Scribner, 1902. $7.50.

Munsell, A. H. Color notation. Boston, Geo. H. Ellis co. $1.25.

Northend, Mary H. Colonial homes and their furnishings. Boston, Little, Brown & co., 1912. 252 p. $5.

Nye, Alvan P. Furniture designing and draughting. Comstock, 1907. 100 p. $2.

Oilar, Forrest L. How to buy furniture for the home. Indianapolis, Ind., Oilar bros., 1913. 179 p. $1.50.

Parsons, Frank A. Interior decoration. Its principles and practice. Garden city, N. Y., Doubleday, Page & co., 1915. 284 p. $3.

Priestman, Mabel T. Art and economy in home decoration. New York, John Lane co., 1908. 222 p. $1 net.

——— Artistic homes. Chicago, A. C. McClurg, 1910. 148 p. $2.

Quinn, Mary J. Planning and furnishing the home. New York, Harper & bros., 1914. 190 p. $1.

Ripley, Mary Churchill. The oriental rug book. New York, Frederick A. Stokes co., 1904. illus. $3.20.

Robinson, L. Eugene. Domestic architecture. New York, Macmillan, 1917. 378 p. $1.50.

Rolfe, Amy L. Interior decoration for the small house. New York, Macmillan, 1917. 151 p. $1.25.

Saylor, Henry H. Bungalows. New York, McBride, 1913. 206 p. $2.50.

Sell, Maud Ann, *and* **Henry Blackman.** Good taste in home furnishing. New York, John Lane co., 1915. 140 p. $1.25.

Shackleton Robert, *and* **Shackleton, Elizabeth.** Adventures in home-making. New York, John Lane co., 1910. 350 p. $1.75.

——— Charm of the antique. New York, Hearst's international library, 1914. $2.50.

Singleton, Esther. Furniture of our forefathers. Garden city, N. Y., Doubleday, Page & co., 1913. 664 p. $1.80.

Snow, Bonnie E., *and* **Froehlich, Hugo B.** Theory and practice of color. New York, Prang co., 1918. 54 p. $3.

Sparrow, Walter S. The English house, how to judge its periods and styles. New York, John Lane co., 1909. $2.50.

——— Hints on house furnishing. New York, John Lane co., 1909. $2.50.

Throop, Lucy A. Furnishing the home in good taste. New York, McBride, Nast & co., 1912. 219 p. $2.

Tryon, Rolla M. Household manufactures in the United States of America, 1640–1680. A study in industrial history. Chicago, University of Chicago press, 1917. 413 p. $2 net.

Van Dyke, John C. Studies in pictures. New York, Charles Scribner's sons, 1907. $1.25.

Vollmer, William A. A book of distinctive interiors. New York, McBride, Nast & co., 1912. 128 p. $1.

Wharton, *Mrs.* **(Edith N.),** *and* **Codman, Ogden J.** Decoration of houses. New York, Scribner, 1901. $2.50.

Wheeler, Cadance. Household art. New York, Harper & bros. $1 net.

——— How to make rugs. Garden city, N. Y., Doubleday, Page & co., 1902. $1.

——— Principles of home decoration. Garden city, N. Y., Doubleday, Page & co., 1903. $1.80.

Wood, Grace, *and* **Burbank, Emily.** The art of interior decoration. New York, Dodd, Mead & co., 1916. 347 p. $2.50.

Wright, *Mrs.* **Agnes F.** Interior decoration for modern needs. New York, Stokes, 1917. 225 p. $2.25.

Your home and its decoration. Cleveland, Ohio, Sherwin Williams co.

6. HOME NURSING.

Aikens, Charlotte A. The home nurse's handbook of practical nursing. Philadelphia, W. B. Saunders, 1912. $1.50.

American Red Cross. Home hygiene and care of the sick. *See* Delano, Jane A.

——— Home nursing. A course for schools. A. R. C. 709. Home hygiene and care of the sick. A. R. C. 704. First aid instruction in the schools. A. R. C. 306.

Campbell, Frances (*Mrs.* G. C.). Book of home nursing: a practical guide for the treatment of sickness in the home. New York, Dutton, 1917. 271 p. $1.25.

Cutler, Elbridge G. The care of the sick room. Cambridge, Harvard university press, 1914. 54 p. 50 cents.

Delano, Jane A., *and* **McIsaac, Isabel.** American Red Cross textbook on elementary hygiene and the home care of the sick. Philadelphia, P. Blakiston's sons & co., 1913. 256 p. illus. $1. Paper, 50 cents.

Donahoe, Margaret Frances. Manual of nursing. New York, Appleton, 1910. 489 p. $2.

Doty, Alva Hunt. Manual of instruction in principles of prompt aid to the injured. New York, Appleton, 1902. $1.50.

Goodnew, Minnie. War nursing. A textbook for auxiliary nurses. Philadelphia, W. B. Saunders co., 1917. 172 p. $1.50.

Griffith, J. Q. Blue book of nursing. Philadelphia, J. C. Winston co., 1912. 461 p. 75 cents.

Harrison, Eveleen. Home nursing. New York, Macmillan co., 1900. $1.

Hope, George H. Till the doctor comes and how to help him. New York, G. P. Putnam's sons, 1901. $1.

Lippert, Frieda, *and* **Holmes, Arthur.** When to send for the doctor and what to do before the doctor comes. Philadelphia, Lippincott, 1913. 265 p. $1.25.

Lippitt, Louisa C. Personal hygiene and home nursing. New York, World book co., 1918. 256 p. $1.28.

Lynch, Charles. American Red Cross textbook on first aid and relief columns. Philadelphia, P. Blakiston's son & co., 1908. 244 p. illus. $1. Woman's edition. 1910. 148 p. 30 cents.

MacDonald, Isabel. Home nursing. New York, Macmillan, 1909. rev. 1917. 331 p. 90 cents.

McIsaac, Isabel. Primary nursing technique. New York, Macmillan, 1907. $1.25.

Maxwell, Anna Carolina, *and* **Pope, Amy Elizabeth.** Practical nursing. New York, G. P. Putnam's sons, 1907. rev. 1914. 881 p. $2.

Morrow, Albert S. Immediate care of the injured. Philadelphia, W. B. Saunders co., 1906. 360 p. illus. $2.50.

Mutual life insurance co. Care of invalids. New York, 1904.

Nightingale, Florence. Notes on nursing. New York, Appleton. 75 cents.

Pope, Amy E. Home care of the sick. Chicago, American school of home economics, 1907. 190 p. $1.50. Textbook edition, $1.25.

Sanders, Georgiana I. Modern methods in nursing. Philadelphia, W. B. Saunders & co., 1916. 900 p. $2.50.

Stacpoole, Florence. Our sick, and how to take care of them. New York, Funk & Wagnalls co. 50 cents.

A stitch in time: Simple and practical remedies and suggestions for use when a physician cannot be secured, and in cases too trivial for professional care. New York, G. P. Putnam's sons, 1912. 75 p. 75 cents.

Stoney, Emily A. M. Practical points in nursing. Philadelphia, W. B. Saunders co., 1910. $1.75.

Struthers, Lina Rogers. The school nurse. New York, G. P. Putnam's sons, 1917. 298 p. $1.75.

Weeks-Shaw, *Mrs.* Clara. A textbook of nursing. New York, D. Appleton & co., 1916. 397 p. $1.75.

7. HOUSEHOLD ACCOUNTS.

Andrews, Benjamin R. A survey of your household finances. New York, Columbia university, Teachers college, 16 p. 10 cents.

Brookman, Thirmuthis A. Family expense account. New York, D. C. Heath & co., 1914. 84 p. 60 cents.

Crandell, C. P. A., *and* **Crandell, Mercy F.** A manual of household accounts. Boston, Whitcomb & Barrows, 1917. 24 p. and 68 account forms. $2 net.

Cromwell, John H. American business woman. New York, G. P. Putnam's sons, 1910. $2.

Fleming, Edith C. Students' expenses. Ithaca, N. Y., Cornell university. (Department of home economics. Record book.) 50 cents.

Fraser, A. S. Fraser budget for personal or family expenses. New York, Tapley specialty co., 1917. 30 p. 75 cents.

Geary, Blanche. My family account book. New York, Women's press, 1917. 32 p. 75 cents.

Haskins, C. W. How to keep household accounts. New York, Harper & bros., 1903. $1.

Kennedy, J. C., *and others.* Wages and family budgets in the Chicago stockyards district, with wage statistics from other industries employing unskilled labor. An investigation carried on under the direction of the board of the University of Chicago settlement. Chicago, University of Chicago press, 1914. 80 p.

King, Clyde L. Lower living costs in cities; a constructive program for urban efficiency. New York, D. Appleton co., 1915. 355 p. $1.50.

Leeds, John B. The household budget, with a special inquiry into the amount and value of household work. Philadelphia, John B. Leeds, 1917. 246 p. $1.50.

Manning, Earl G. The Manning home budget. Blanks for use. Boston, Small, Maynard & co., 1918. 75 cents.

The personal account book. New York, Womans' press. 10 cents.

Rittenhouse, Charles F. Elements of accounts for individuals, professional men and institutions. New York, McGraw-Hill book co., 1918. 115 p. $2.

Rorer, *Mrs.* **Sarah T.** Household accounts. Philadelphia, Arnold, 1912. 25 cents.

Sheaffer, William A. Household accounting and economics. New York, Macmillan, 1917. 161 p. 65 cents.

Taber, C. W. The business of the household. Philadelphia, Lippincott, 1918. 438 p. $2 net.

Whigam, W. H., *and* **Frederick, O. D.** Household accounting. New York, A. N. Palmer co., 1913, 48 p. (Palmer series of commercial textbooks.) $1.

Wilbur, Mary A. Every-day business for women. Boston, Houghton Mifflin co., 1910. 46 p. $1.25.

Winslow, Emma A. Your household budget in graphic form. A new method of analyzing and controlling household expenditures. New York, Published by the author, 525 W. 120th st. 15 cents.

8. HOUSEWIFERY.

(*See* Management of the House.)

9. LAUNDRY WORK.

Balderston, L. Ray. Home economics. Laundering. Philadelphia, Published by the author, 1224 Cherry st., 1914. 214 p. $1.25.

Brannt, William T., *ed.* Practical dry cleaner, scourer, and garment dryer. Philadelphia, Henry Carey Baird, 1911. 351 p. $2.50.

Calder, Fanny L., *and* **Mann E. E.** Teachers' manual of elementary laundry work. New York, Longmans, Green & co. 82 p. 30 cents.

Chambers, Mary D. A guide to laundry work. Boston, Boston cooking school magazine co., 1915. 104 p. 75 cents.

Foster, Leslie E. Secrets of dry cleaning. A handy book for amateurs. York, Nebr., Foster dry cleaning co., 1918. 119 p. $1.50.

Harris, Louis I., *and* **Swartz, Nelle.** Cost of clean clothes in terms of health. New York, Consumers' league.

Home laundry hints. Minneapolis, Minn., Luther Ford & co., manufacturers. Free to teachers.

Jack, Florence B. The art of laundry work practically demonstrated for use in homes and schools. Edinburgh and London, T. C. & E. C. Jack, 1902.

Marsh, E. L. Laundry work in theory and practice. New York, Longmans, Green & co., 1914. 205 p. 75 cents.

Osman, E. G. Cleaning and renovating at home. Chicago, A. C. McClurg & co., 1910. 193 p. 75 cents.

Rose, Flora. The laundry. Ithaca, N. Y., New York state college of agriculture, Cornell university, 1909. (Cornell reading course for farmer's wives, no. 11.)

Shepperd, Juniata L. Laundry work. St. Paul, Webb pub. co., 1910. 116 p. 60 cents.

Vail, Mary B. Approved methods of laundry work. Cincinnati, Procter & Gamble co., 1906. Gratis.

Wadhams, Caroline Reed. Simple directions for the laundress. New York, Longmans, 1916. 50 cents.

Wetenhall, Louise. Practical laundry work for home and school. New York, E. P. Dutton & co., 1915. 172 p. $1.

10. MANAGEMENT OF THE HOUSE.

Balderston, L. Ray. Housewifery. Philadelphia, Lippincott, 1918. 438 p. $2 net.

Barnard, Charles. Housekeeping efficiency. Stamford, Conn., Housekeeping experiment station, 28 Hoyt st. 80 cents, postage prepaid.

Beecher, Catharine E., *and* **Stowe, Harriet Beecher.** Principles of domestic economy. New York, J. B. Ford & co., 1870. 381 p.

Beecher, Eunice W. (*Mrs.* **Henry Ward.**) The home; how to make and keep it. Minneapolis, Buckeye publishing co., 1883. 598 p.

——— Law of the household. Boston, Small, Maynard & co., 1912. $2.

Browne, Phyllis. Practical housekeeping. New York, Funk & Wagnalls co. 50 cents.

Bruère, M. B., *and* **Bruère, R. W.** Increasing home efficiency. New York, Macmillan, 1912. 318 p. $1.50.

Burrell, Caroline B. (**Benton, Caroline French.**) A little housekeeping book for a little girl; or, Margaret's Saturday mornings. Boston, Page co., 1906. 85 cents.

——— Living on a little. Boston, Dana, Estes & co., 1908. $1.25.

Butterworth, A. Manual of household work and management. New York, Longmans, Green & co., 1906. 90 cents.

Child, Georgie B. The efficient kitchen. New York, McBride, Nast & co., 1914. 242 p. $1.25.

Croy, Mae Savell. 1,000 shorter ways around the house. New York, G. P. Putnam sons, 1916. 327 p. (Putnam's household handbook.) $1.50.

Curtis, *Mrs.* **Isabel G.** The making of a housewife. New York, Stokes, 1906. $1.25.

Dods, M. L. The ideal home. New York, Dutton, 1917. 976 p. $8.

Eckford, E. Stoddart, *and* **Fitzgerald, M. S.** Household management. London, John Hogg, 1915. 430 p. $1.25.

Farmer, Lissie C. A-B-C of home saving. New York, Harper, 1916. 114 p. 50 cents.

Foster, Oliver Hyde. Housekeeping for little girls. New York, Duffield & co., 1912. 116 p. 75 cents.

Franks, Thetta Q. Household organization for war service. New York, Putnam, 1917. 93 p. $1.

Frederick, *Mrs.* **Christine.** The new housekeeping. Efficiency studies in household management. Garden city, N. Y., Doubleday, Page & co., 1913. 266 p. $1.

Gilman, Elizabeth Hale, *and* **Archer, Effie Archer.** Things girls like to do. Part I, Housekeeping. 246 p. Part II, Needlecraft, 293 p. Philadelphia, Uplift publishing co., 1917. $2.50.

Goodholme, Todd S., *ed.* Goodholme's domestic cyclopedia of practical information. New York, Chas. Scribner's sons, 1889. 652 p. $5.

Hasluck, Paul N. Domestic jobbing. Philadelphia, McKay, 1907. 50 cents.

Herrick, Christine Terhune. First aid to the young housekeeper. New York, Chas. Scribner's sons, 1900. $1.

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Hewitt, Emma. How to live on a small income. Washington, Jacobs, 1909. 50 cents.

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Norman, Roger, *and Mrs.* R. B. Wife's handbook. Menasha, Wis., Banta pub. co., 1916. 233 p. $2.

Parloa, Maria. Home economics. New York, Century co., 1906. 416 p. $1.50.

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White, Marian. The fuels of the household; their origin, composition and uses. Boston, Whitcomb & Barrows, 1909. 97 p. 75 cents.

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Herrick, Glen W. Insects injurious to the household. New York, Macmillan, 1914. 470 p. $1.75.

Hewitt, Charles G. House flies and how they spread disease. New York. Putnam, 1912. 122 p. 40 cents.

Howard, Leland O. The housefly disease carrier. New York, Frederick A. Stokes, 1911. $1.60.

Hutchinson, Woods. Community hygiene. Boston, Houghton Mifflin co., 1916. 310 p. 60 cents.

Lynde, C. J. Home waterworks; a manual of water supply in country homes. New York, Sturgis & Walton, 1911. 270 p. $1.

Ogden, Henry N., *and* **Burdett, Cleveland H.** Practical methods of sewage disposal for residences, hotels, and institutions. New York, John Wiley & sons, 1912. 132 p. $1.50.

Price, George M. Handbook on sanitation. New York, John Wiley & sons, 1905. 305 p. $1.50.

Putnam, J. P. Plumbing and household sanitation. Garden city, N. Y., Doubleday, Page & co., 1911. 718 p. $3.75.

Raynes, F. W. Domestic sanitary engineering and plumbing. New York, Longmans, Green & co., 1909. 474 p. $3.

Richards, Ellen H. The cost of cleanness. New York, John Wiley & sons, 1908. 109 p. $1.

——— The cost of living as modified by sanitary science. New York, John Wiley & sons, 1905. 156 p. $1.

——— Sanitation in daily life. Boston, Whitcomb & Barrows, 1907. 82 p. 60 cents.

Ritchie, John W. Primer of sanitation. Yonkers-on-Hudson, N. Y., World book co., 1909. 50 cents.

Roberts, I. P. The farmstead. New York, Macmillan, 1907. 345 p. $1.50.

Robertson, Lionel, *and* **O'Donnell, T. C.** Healthful house. Battle Creek, Mich., Good health publishing co., 1917. 191 p. $2.

Ross, Edward H. The reduction of domestic flies. Philadelphia, Lippincott, 1913. 103 p. $1.50.

Saint Maur, ***Mrs.*** **Kate.** Making home profitable. New York, Sturgis & Walton, 1912. 229 p. $1.

——— Self supporting home. New York, Macmillan, 1913. 50 cents.

Sedgwick, William T. Principles of sanitary science and the public health. New York, Macmillan, 1902. 368 p. $3.

Talbot, Marion. House sanitation. Boston, Whitcomb & Barrows, 1912. 119 p. Cloth, 80 cents. Paper, 50 cents.

Van Rensselaer, Martha ***and others, compilers.*** Manual of home-making. New York, Macmillan, 1919. 661 p. (Rural manuals.) $2.50.

Waring, George E., ***jr.*** How to drain a house. Practical information for householders. New York, D. Van Nostrand co. illus. 229 p. $1.25.

——— The sanitary drainage of houses and towns. Boston, Houghton Mifflin co. $2.

Wingate, Charles F. The sanitary question box. New York, Funk, 1907. 50 cents.

13. TABLE SERVICE AND TABLE ETIQUETTE.

(*See also* Cook Books *and* Textbooks for Cooking.)

Allen, Lucy G. Table service. Boston, Little, Brown & co., 1916. 128 p. $1.25.

Fales, Winnifred S., *and* **Northend, Mary H.** The party book. Boston, Little, Brown & co., 1912. 354 p. $2.

Hall, *Mrs.* **Florence H.** Good form for all occasions. New York, Harper, 1914. 228 p. $1.

——— Book of etiquette: boys and girls and manners. Boston, Dana, Estes & co., 1913. 323 p. $1.35.

——— A handbook of hospitality for town and country. Boston, Dana, Estes & co., 1909. $1.50.

Hill, Janet. The up-to-date waitress. Boston, Little, Brown & co., 1906. $1.50.

Hiller, Elizabeth O. Fifty-two Sunday dinners. Chicago, Fairbank co., 1915. 192 p. $1.

Kansas. State agricultural college, Manhattan. The etiquette and service of the table. 1916.

McNaught, *Mrs.* **Margaret S.** Training in courtesy. Suggestions for teaching good manners in elementary schools. Washington, Government printing office, 1917. (U. S. Bureau of education. Bulletin, 1917, no. 54.) 10 cents.

Marchant, Eleanor. Serving and waiting at the table. New York, Frederick A. Stokes co., 1905. $1.30.

Ordway, Edith B. The etiquette of today. New York, Sulley & Kleinteich, 1913. 236 p. 50 cents.

Roberts, Helen L. The encyclopedia of social usage. New York, G. P. Putnam's sons, 1913. 570 p. $2.50.

Sangster, Margaret E. Good manners for all occasions. New York, Cupples & Leon co., 1910. 400 p. $1.25.

Springsteed, A. F., *and* **Cole,** *Mrs.* **Anne Frances.** The expert waitress: a manual for pantry and dining room. New York, Harper & bros., 1912. 155 p. $1.

14. TEXTBOOKS IN HOMEMAKING.

(*See also* Textbooks in Cooking,[1] Textbooks in Sewing,[2] and Management of the House.)

Kinne, Helen, *and* **Cooley, Anna M.** The home and the family. An elementary textbook of home making. New York, Macmillan, 1917. 292 p. 80 cents.

XI. SCIENCES RELATED TO HOME ECONOMICS.

1. BACTERIOLOGY.

Buchanan, E. D., *and* **Buchanan, R. E.** Household bacteriology for students in domestic science. New York, Macmillan, 1913. 536 p. $2.25.

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[1] **Arch**: Domestic work for rural schools. **Foster**: Housekeeping for little girls. **Kinne** *and* **Cooley**: Foods and household management. **Kittredge**: The home and its management; Housekeeping notes; Practical home making; A second course in home making. **Pirie**: The science of home making.

[2] **Kinne** *and* **Cooley**: Shelter and clothing.

Conn, H. W. Bacteria, yeasts, and molds in the home. New York, Ginn & co., 1903. 295 p. $1.

——— The story of germ life. New York, Appleton. 35 cents.

Dieudonne, Adolf. Bacterial food poisoning. New York, Treat, 1909. $1.

Elliott, S. Maria. Household bacteriology. Chicago, American school of home economics, 1907. 170 p. $1.50. Textbook edition, $1.25.

Frankland, *Mrs.* Grace C. Bacteria in daily life. New York, Longmans, 1903 $1.75.

Jordan, Edwin O. Textbook of general bacteriology. Philadelphia, Saunders. 1916. 669 p. $3.25. Rev. 1918. 691 p. $3.75.

Lipman, J. G. Bacteria in relation to country life. New York, Macmillan, 1908. 472 p. $1.50.

Marshall, C. E., *ed.* Microbiology for agricultural and domestic science students. Philadelphia, P. Blackiston's son & co., 1911. xxi, 724 p. $2.50.

Morrey, Charles B. Fundamentals of bacteriology. New York, Lea Febiger, 1917. 289 p. $3.

Prudden, Theophel M. Dust and its dangers. New York, Putnam, 1910. 75 cents.

——— The story of the bacteria and their relations to health and disease. New York, Putnam, 1910. 232 p. 75 cents.

Reed, Howard S. A manual of bacteriology for agricultural and domestic science students. New York, Ginn & co., 1914. 179 p. $1.25.

Winton, Andrew L. The microscopy of vegetable foods. New York, Wiley, 1916. 701 p. $6.50.

2. CHEMISTRY.

Allyn, Lewis B. Elementary applied chemistry. New York, Ginn & co., 1912. 127 p. 60 cents.

Bailey, E. H. S. A textbook of sanitary and applied chemistry. New York, Macmillan, 1906. 345 p. $1.40.

Blanchard, J. M. Household chemistry for girls; a laboratory guide. Boston, Allyn & Bacon, 1912. 104 p. 50 cents.

Brownlee, R. B., *and others.* The chemistry of common things. Boston, Allyn & Bacon, 1914. 624 p. $1.50.

Dodd, Margaret E. Chemistry of the household. Chicago, American school of home economics, 1907. 168 p. $1.50. Textbook ed., $1.25.

Henwood, A., *and* Griffin, F. H. Laboratory work in applied chemistry for students of domestic science. Philadelphia, Drexel institute, 1912. 62 p. $1.50.

Kahlenberg, Louis, *and* Hart, Edwin B. Chemistry and its relation to daily life. New York, Macmillan, 1913. 393 p. $1.25.

Lassar-Cohn. Chemistry in daily life. Philadelphia, Lippincott, 1909. 4th ed. $1.75.

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Sherman, H. C. Chemistry of food and nutrition. New York, Macmillan, 1911. 355 p. $1.50. 2d ed., 1918. 454 p. $2.

——— Food products, New York, Macmillan, 1914. 594 p. $2.25.

Snyder, H. Human foods and their nutritive value. New York, Macmillan, 1908. 355 p. $1.25.

Stiles, Percy. An adequate diet. Cambridge, 1916. 48 p. (Harvard health talks.) 50 cents.

Thompson, W. Gilman. Practical dietetics, with special reference to diet in disease. 4th ed. rev. and enl. New York, D. Appleton & co., 1909. 928 p. $6.

Tibbles, William. Dietetics or food in health and disease. Philadelphia, Lea & Febiger, 1914. 627 p. $4.

Watson, Chalmers. Food and feeding in health and disease; a manual of practical dietetics. New York, William Wood & co., 1913. 654 p. $5.

Wiley, Harvey W. Not by bread alone; the principles of human nutrition. New York, Hearst's international library co., 1915. 374 p. $2.

5. PHYSICS.

Butler, Alfred M. Household physics. Boston, Whitcomb & Barrows, 1914. 382 p. $1.30.

Hale, Charles W. Domestic science. A course in elementary science dealing with domestic phenomena. New York, Putnam, 1915–16. vol. 1. 327 p. 90 cents. vol. 2. 300 p. $1.

Keene, E. S. Mechanics of the household; a course of study devoted to domestic machinery and household mechanical appliances. New York, McGraw-Hill book co., 1918. 390 p. $2.50.

Lynde, C. J. Physics of the household. New York, Macmillan, 1914. 313 p. $1.25.

6. PHYSIOLOGICAL CHEMISTRY.

Abderhalden, Emil. Defensive ferments of the animal organism. London, John Bale sons & Danielson, 1914. 242 p. $2.75.

——— Physiological chemistry. Trans. by W. T. Hall and G. Defren. New York, Wiley, 1908. 722 p. $5.

Beebe, S. P., *and* Buxton, B. H. Outlines of physiological chemistry. New York, Macmillan, 1904. 195 p. $1.50.

Bunge, Gustav. Textbook of physiological and pathological chemistry. Philadelphia, Blakiston, 1902. 470 p. $3.

Cohnheim, Otto. Chemistry of the proteids. Trans. by Gustav Mann. New York, Macmillan, 1906. 606 p. $3.75.

Effront, Jean. Biochemical catalysts in life and industry. Proteolytic enzymes. New York, Wiley, 1917. 752 p. $5.

——— Enzymes and their applications Trans. by S. P. Prescott. New York, Wiley, 1902. 2 vols. vol. 1. 322 p. $3.

Euler, Hans. General chemistry of the enzymes. New York, Wiley, 1912. 323 p. $3.

Fischer, Martin H. Physiology of alimentation. New York, John Wiley & sons, 1907. 348 p. $2.

Fitch, William Edward, *and others*. Dietotherapy. New York, Appleton, 1918. 3 vols. $21 per set.

Green, Joseph R. The soluble ferments and fermentation. New York, Putnam, 1901. $3.

Halliburton, William D. Essentials of chemical physiology. New York, Longmans, Green & co., 1910. 280 p. $1.50.

Hammarsten, Olof. Textbook of physiological chemistry. New York, Wiley, 1911. 964 p. $4.

Hawk, Philip B. Practical physiological chemistry. Philadelphia, Blakiston, 1910. $2.50.

Hill, Charles. Manual of normal histology and organography. Philadelphia, Saunders, 1909. 468 p. $2.

Hill, Leonard E., *ed.* Recent advances in physiology and bio-chemistry. New York, Longsmans, 1908. $5.

Jackson, Holmes C. Directions for laboratory work in physiological chemistry. New York, Wiley, 1903. 150 p. $1.25.

Matthews, A. P. Physiological chemistry. A textbook and manual for students. New York, Wood, 1915. 1040 p. $4.25.

Pavlov, Ivan P. Work of the digestive glands. Philadelphia, Lippincott. 1911. $3.

Robertson, T. Brailsford. The physical chemistry of the proteins. New York, Longmans, Green & co., 1918. 483 p. $5.

Salkowski, E. A. Laboratory manual of physiological and pathological chemistry. New York, Wiley. 1904. 263 p. $2.50.

Simon, Charles E. Text of physiological chemistry. Philadelphia, Lea bros., 1907. 490 p. $3.25.

Stiles, Percy G. Nutritional physiology. Philadelphia, W. B. Saunders co., 1912. 275 p. illus. $1.50.

Taylor, Alonzo E. Digestion and metabolism; the physiological and pathological chemistry of nutrition for students and physicians. Philadelphia, Lea & Febiger, 1912. 560 p. $3.75.

Tigerstedt, Robert A. A. Textbook of physiology. New York, Appleton. 1906, $4.

Underhill, Frank P. The physiology of the amino acids. New Haven, Conn., Yale university press, 1915. 169 p. $1.35.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 47

Private Commercial and Business Schools, 1917-18

PREPARED IN THE STATISTICAL DIVISION
OF THE BUREAU OF EDUCATION
UNDER THE SUPERVISION OF H. R. BONNER
COLLECTOR AND COMPILER OF STATISTICS

[Advance sheets from the Biennial Survey of Education
in the United States, 1916-1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1920

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V

PRIVATE COMMERCIAL AND BUSINESS SCHOOLS, 1917-18.

CONTENTS.—Biennial statistics—Schools included—Classification of schools—Graduates—Number of schools reporting—Size of schools—Enrollment—The moving average of index numbers—Average attendance in day and night schools—Enrollment by course of study—Instructors—Average number of students per instructor—Length of daily session—Tuition fees—Shorthand systems taught.

BIENNIAL STATISTICS.

Throughout the following report it will be observed that no historical statistics are given for the school year 1916–17. After the statistical report for the scholastic year 1915–16 had been compiled the Bureau of Education adopted the plan of collecting statistical reports biennially instead of annually as had been done the preceding years. The changes in the totals of corresponding items for consecutive years are very slight, and for most purposes biennial statistics will suffice.

SCHOOLS INCLUDED.

In corresponding preceding reports certain statistics of commercial departments of public high schools have been included in the chapter on private commercial and business schools. This year this chapter will be published before the high-school reports will have been tabulated. A report on the larger commercial departments in public and private high schools will appear in the chapter on "High Schools" in the Biennial Survey. Statistics on commercial departments in colleges and universities will be found in the chapter on "Colleges, universities, and professional schools" of the Biennial Survey.

CLASSIFICATION OF SCHOOLS.

This chapter contains statistics of two types of schools hitherto tabulated together in alphabetical order: First, the purely private commercial and business schools not connected or affiliated with any religious organization and, second, the Y. M. C. A. commercial departments and schools conducted by religious organizations. In the following pages the two types will be referred to for convenience as nondenominational and denominational schools, although it is well understood that the Y. M. C. A. schools are not "denominational" in the usual sense. The statistics of these two types of schools are so unlike that it is thought advisable to separate them and to make summary tables for each group. The historical graphs and the graphs on shorthand systems taught, as used herein, embrace both types of schools, while the graphs showing "students per instructor," and "hours per day," and showing tuition rates include only nondenominational commercial schools. This classification, therefore, separates the schools which are conducted on a purely commercial basis from those having a religious or denominational trend and warrants certain deductions concerning the former which would be more or less vitiated if the latter had not been placed in a separate tabulation.

GRADUATES.

So unsatisfactory have been the returns designating the number of graduates that this inquiry was omitted from the statistical schedule for 1917–18. A large number of commercial school students leave school before they have finished the prescribed course or just as soon as they can qualify for a position. In many schools students are permitted to leave at any time and no regular graduation exercises are held. Consequently, it is difficult for commercial schools to keep accurate records on the number of graduates. Further, graduation from a 3-months' course is not equivalent to graduation from a 12-months' course, and the total number of graduates is without special significance.

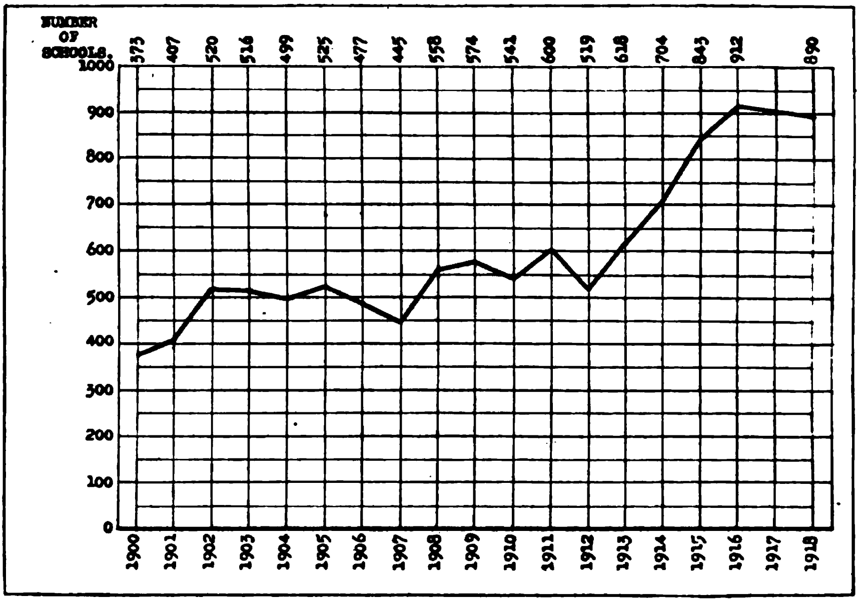

FIG. 1.—Number of private commercial and business schools reporting, 1900–1918.

NUMBER OF SCHOOLS REPORTING.

This year a slight decrease is shown in the number of private commercial and business schools reporting. In 1916, reports were received from 912 schools, while in 1918 only 890 schools submitted reports which could be used. This decrease may be due to the discontinuation of a number of smaller schools on account of war conditions, but many schools this year either refused to report or submitted an inconsistent report which could not be included in the detailed tabulations. The Bureau of Education maintains a mailing list of private commercial and business schools which contains 1,329 schools, as indicated in columns 2 and 11 of Table 7. This list has been revised annually, and probably includes a large percentage of such schools in the United States. It can be seen, therefore, that this chapter is not a complete presentation of private commercial school statistics, but it is representative in that it contains 67 per cent of all schools listed.

TABLE 1.—*Summary of statistics of all private commercial and business schools reporting, 1900 to 1918.*

Schools and students.	1900	1901	1902	1903	1904	1905	1906	1907	1908
Schools reporting	373	407	520	516	499	525	477	445	558
Instructors:									
Men	1,413	1,596	1,996	1,979	1,898	2,016	1,825	1,720	1,979
Women	699	838	1,092	1,132	1,124	1,260	1,163	1,136	1,386
Total	2,112	2,434	3,088	3,111	3,022	3,276	2,988	2,856	3,365
Total students, day and night schools:									
Men	58,396	68,519	81,344	79,175	80,596	84,621	74,366	75,589	82,921
Women	33,153	41,512	55,903	58,804	57,767	61,465	55,719	61,775	72,042
Total	91,549	110,031	137,247	137,979	138,363	146,086	130,085	137,364	154,963
Total students in day schools	70,978	81,694	109,107	106,989	105,967	113,255	100,995	96,100	124,730
Total students in night schools	16,094	20,470	27,597	30,994	32,120	34,205	33,404	32,643	39,031
Average attendance, day schools	......	......	[1]55,162	[1]61,577	[1]58,339	46,534	40,988	39,687	51,317
Average attendance, night schools	......	......	......	......	......	15,676	13,180	14,524	16,840
Total students in commercial or bookkeeping course	50,382	68,280	72,953	68,980	67,654	72,804	71,488	57,271	62,075
Total students in stenographic or amanuensis course	34,505	39,070	58,734	62,748	61,923	65,370	64,857	53,991	58,479
Total students in combined course	......	......	......	......	......	......	......	......	19,217
Total students in telegraphy course (wire)	1,319	1,974	4,227	2,577	2,934	3,923	......	3,083	3,724
Per cent of attendance, day school	......	......	......	......	......	41	40	41	41
Per cent of attendance, night school	......	......	......	......	......	45	40	43	42

Schools and students.	1909	1910	1911	1912	1913	1914	1915	1916	1918
Schools reporting	574	541	600	519	618	704	843	912	890
Instructors:									
Men	1,923	1,736	1,926	1,758	1,878	2,019	2,396	2,604	2,310
Women	1,377	1,200	1,379	1,262	1,505	1,731	1,913	1,987	2,930
Total	3,300	2,936	3,305	3,020	3,383	3,750	4,309	4,591	5,240
Total students, day and night schools:									
Men	78,652	72,887	82,775	72,258	82,775	85,432	94,870	99,134	96,449
Women	67,636	61,891	72,469	65,532	77,782	82,631	88,416	93,254	193,130
Total	146,288	134,778	155,244	137,790	160,557	168,063	183,286	192,388	289,579
Total students in day schools	112,522	100,746	115,565	102,407	117,881	119,572	130,431	128,736	182,614
Total students in night schools	34,160	34,032	39,679	35,383	42,676	48,491	52,855	63,652	106,965
Average attendance, day schools	49,186	44,290	52,008	43,451	52,697	56,396	60,894	56,992	79,675
Average attendance, night schools	14,550	14,593	16,343	15,714	18,274	20,579	22,670	26,530	43,013
Total students in commercial or bookkeeping course	55,482	47,703	51,022	43,295	49,643	56,894	60,801	61,315	69,520
Total students in stenographic or amanuensis course	49,441	44,868	52,405	48,069	55,649	63,915	72,362	70,554	152,402
Total students in combined course	20,590	17,720	22,768	22,613	27,051	31,443	38,291	40,486	48,481
Total students in telegraphy course (wire)	3,413	2,094	2,713	2,134	2,047	3,648	3,059	3,341	4,915
Per cent of attendance, day school	44	43	45	42	45	47	45	44	43
Per cent of attendance, night school	41	43	41	43	42	43	42	42	40

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[1] Includes attendance in night schools.

The increase in the number of commercial schools reporting each year since 1900 is shown in Table 1 and in figure 1. A decided increase is shown since 1912. Previous to this date a certain irregularity in the curve exists, an abrupt rise being evident in 1901 and 1902 and a falling off in 1906 and 1907. Presumably in the past few years a more thorough method has been used in procuring reports than was used in the years immediately preceding, or possibly there has been a growing interest on the part of private commercial schools in submitting reports. The general rise in the curve can not be attributed wholly to these two factors, but chiefly to the rapid multiplication of schools of this type throughout the country.

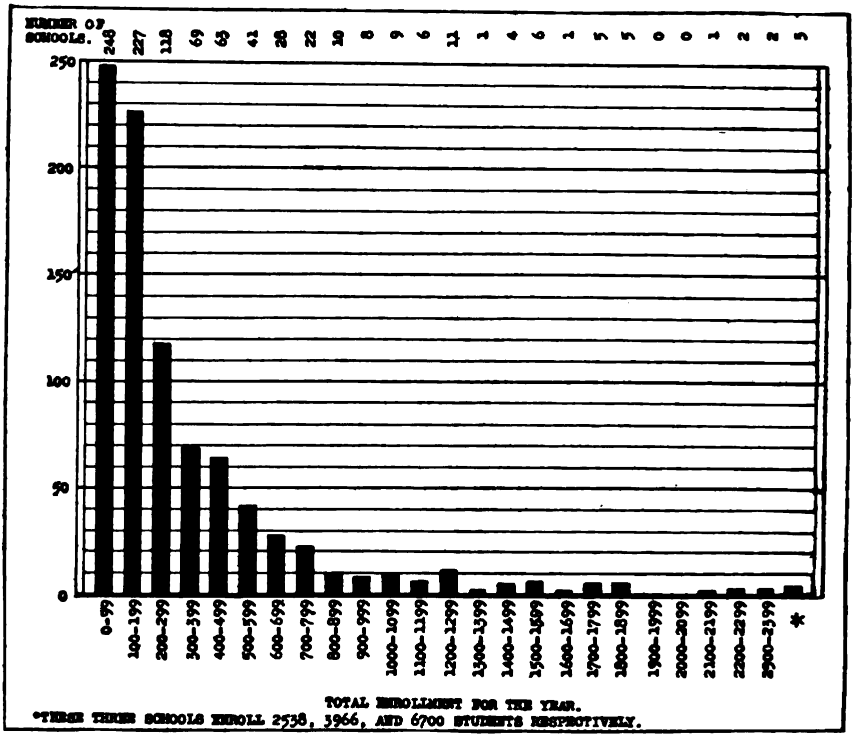

FIG. 2.—Distribution of 890 private commercial schools, according to enrollment, 1917–18.

SIZE OF SCHOOLS.

By reference to figure 2 it will be noted that many schools are very small, 248 having an enrollment of less than 100 for the year, and 227 having an enrollment of from 100 to 199, inclusive. Only three schools have an enrollment exceeding 2,500. The median enrollment of the 890 schools falls between 186 and 187. This means that 445 schools have an enrollment of 187 or over and 445 schools have an enrollment of 186 or less. The median, therefore, falls in the second bar in figure 2 in the group having an enrollment of between 100 and 199, inclusive. If the enrollment in all schools is arranged in order of magnitude, and the array is divided into four nearly equal groups of 222, 223, 222, and 223 schools, respectively, it is found that the first group contains schools having an enrollment of 90 students or fewer; the second an enrollment of from 90 to 186; the third an enrollment of between 187 and 400; and the highest group, an enrollment of 400 and over. In other words, half the commercial schools have an enrollment of between 90 and 400, inclusive. The average enrollment is 325 students.

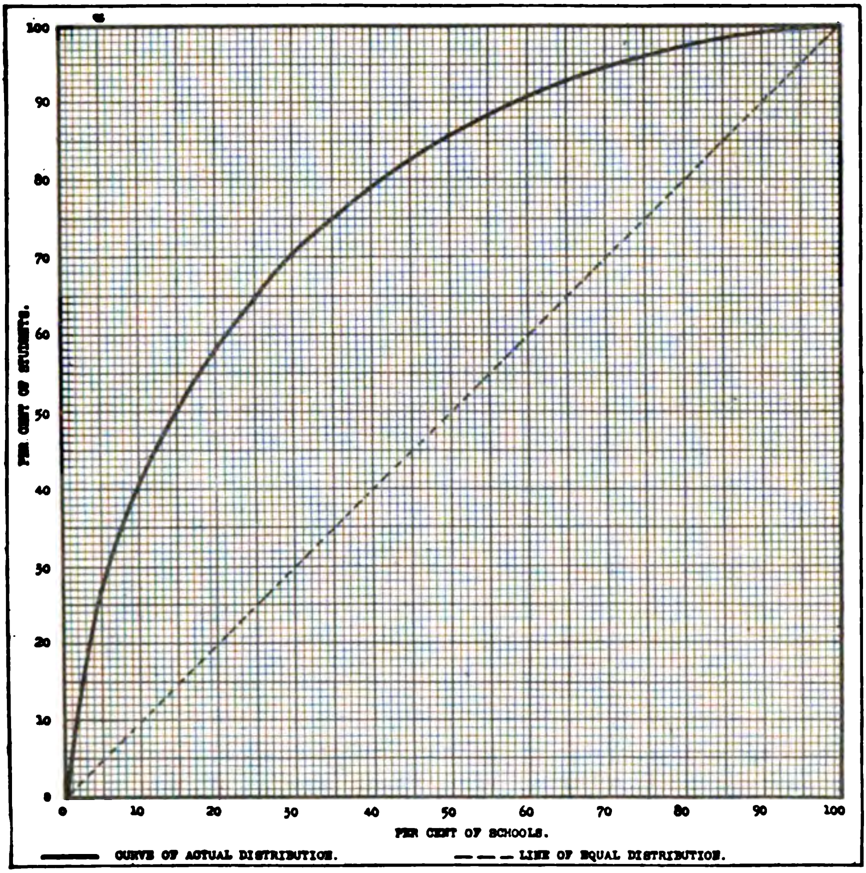

FIG. 3.—Distribution of students in private commercial schools, 1917–18.

The curve in figure 3 enables the reader to determine readily the percentage of students in any desired percentage of schools, or vice versa. Reading from the vertical scale, one will observe that 60 per cent of the students are enrolled in about 22 per cent of the schools, and 90 per cent of the students in about 59 per cent of the schools. Reading from the base line, one may see that 50 per cent of the schools enroll 85.5 per cent of the students, and 30 per cent of the schools enroll 70.4 per cent of the students. If the enrollment were equally distributed in all schools, the curve would follow the "line of equal distribution" in such a way that 50 per cent of the schools would enroll 50 per cent of the students, and 70 per cent of the students would be enrolled in 70 per cent of the schools. The "bowing" of the curve away from the line of equal distribution indicates the degree of inequality in the distribution, or, in technical terms, the dispersion in the distribution. The further the curve recedes from the line of equal distribution the greater the dispersion. The nearer the curve comes to the vertical and horizontal axes of the graph, the nearer the maximum dispersion is reached. For a large group of measures the two axes represent for all practical purposes the greatest inequality possible between the largest and the smallest schools.

TABLE 2.—*Derivation of data, used in figure 3, showing the distribution of students in all private commercial and business schools reporting in 1917–18.*

Groups.	Schools.			Students.			
	Number in group.	Percentage in group (approximately).	Percentage in this group and in all preceding groups—accumulated.	Number in group.	Number in this group and in all preceding groups—accumulated.	Percentage in group.	Percentage in this group and in all preceding groups—accumulated.
1	2	3	4	5	6	7	8
1[1]...............	44	5	5	77,607	77,607	26.8	26.8
2...............	45	5	10	39,976	117,583	13.8	40.6
3...............	44	5	15	27,895	145,478	9.6	50.2
4...............	45	5	20	23,085	168,563	8.0	58.2
5...............	44	5	25	18,948	187,511	6.5	64.7
6...............	45	5	30	16,504	204,015	5.7	70.4
7...............	44	5	35	13,411	217,426	4.6	75.0
8...............	45	5	40	11,760	229,186	4.1	79.1
9...............	44	5	45	9,764	238,950	3.4	82.5
10...............	45	5	50	8,817	247,767	3.0	85.5
11...............	44	5	55	7,717	255,484	2.7	88.2
12...............	45	5	60	6,999	262,483	2.4	90.6
13...............	44	5	65	6,034	268,517	2.1	92.7
14...............	45	5	70	5,347	273,864	1.8	94.5
15...............	44	5	75	4,305	278,169	1.5	96.0
16...............	45	5	80	3,692	281,861	1.3	97.3
17...............	44	5	85	2,936	284,797	1.0	98.3
18...............	45	5	90	2,328	287,125	.8	99.1
19...............	44	5	95	1,583	288,708	.6	99.7
20...............	45	5	100	871	289,579	.3	100.0
Total.......	890	100	....	289,579	....	100.0	....

[1] The groups are arranged in order of magnitude, i. e., group 1 includes the 44 largest schools; group 2, the 45 next largest, etc.

Table 2 shows the method ascertaining the location of the curve just described. The 890 schools were divided into 20 groups, composed alternately of 44 and 45 schools, the total not admitting of an equal division. Group 1 includes the 44 largest schools, group 2 the 45 next largest schools, etc. Approximately 5 per cent of the schools are in each group. The number and percentage of students in each group of schools are determined as shown in columns 5 and 7, and the corresponding accumulated totals in columns 6 and 8. The curve is then located at the points on each 5 per cent line indicated by the percentage of students enrolled in each group.

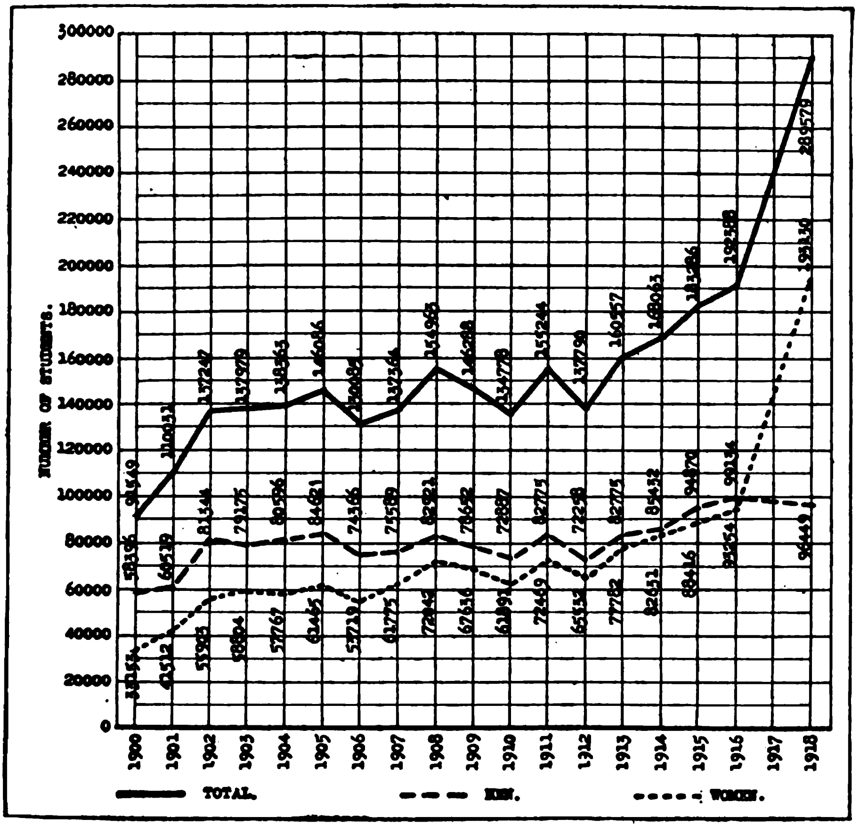

FIG. 4.—Total number of students in private commercial schools, 1900–1918.

ENROLLMENT.

By reference to figure 4 of Table 1 it will be observed that a decided increase in enrollment has taken place since 1916. This increase of 97,191 students, or over 50 per cent, has not been due to an increase in the number of schools reporting, since it has been shown above that there was an actual decrease of 22 schools reporting. Assuming that there are 1,329 private commercial schools in the United States, one can readily see that the 912 schools reporting in 1916 and the 890 reporting in 1918 constitute fair samples of the total number. It is unlikely, also, that larger schools reported in 1918 than did in 1916. The increase of 50 per cent in enrollment within the past two years has undoubtedly been due to war demands. The call for clerks, stenographers, bookkeepers, and telegraph operators has caused many students to enter private commercial schools where the necessary training could be secured in the shortest time.

This conclusion is further warranted by the fact that the large increment in enrollment is due wholly to the increase in the number of women students. It will be noted that there has been a decrease of 2,685, or 27 per cent, in the number of men students enrolled and an increase of 99,876, or 107 per cent, in the number of women students enrolled. In other words, the enrollment of women students has more than doubled within the past two years. From the graph it will be observed that there has been a more rapid increase since 1900 in the number of women than in the number of men. The rate of increase, while gradual, does not become pronounced until 1918. The figures warrant, therefore, the further conclusion that an increasingly larger number of women than men are attending private commercial schools. The demand for stenographers, the large percentage of whom are women, may account for the rapid rise in the curve representing the enrollment of women. Eliminating from consideration the abnormal statistics for 1918, it is found that from 1900 to 1916 the number of women enrolled shows an increase of 60,101, or per cent, while the number of men enrolled shows an increase of

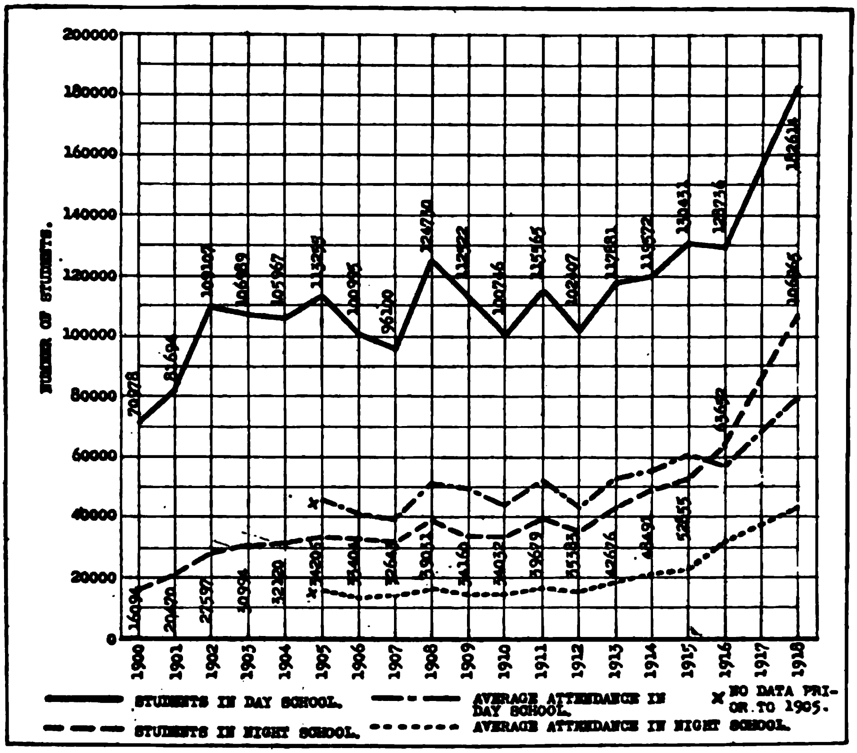

FIG. 5.—Students and average attendance in day and night courses in private commercial schools, 1900–1918.

only 40,738, or 70 per cent. All this indicates a shifting in the personnel of the student body. The slight irregularities in the curves are undoubtedly due to the fact that the Bureau of Education must depend entirely upon the good will of the presidents of commercial schools to submit a report, and consequently at no time do the statistics present the whole situation.

ENROLLMENT IN DAY AND IN NIGHT COURSES.

This year 716 private commercial schools reported night courses. This means that over 80 per cent of such schools maintained night courses. It is of interest to note the very rapid rise in enrollment in night courses as depicted in figure 5. The increase has been very pronounced since 1912, and especially so within the past two years. In the day courses there has been a corresponding increase for the same periods, but the rate of increase has not been so great. This fact can not be readily determined from the graph, but is very apparent in figure 6, in which the enrollment for each year has been reduced to index numbers.

TABLE 3.—*Method of computing the index numbers and the moving averages used in figure 6.*

Years.	Enrollment.		Index numbers[1] for—		Total indices for 5-year periods.		Moving average of index numbers.	
	Day schools.	Night schools.	Day schools.	Night. schools.	Day schools.	Night schools.	Day schools.	Night schools.
1	2	3	4	5	6	7	8	9
1900	70,978	16,094	63	40	[3] 359	[3] 237	[3] 72	[3] 47
1901	81,694	20,470	73	50	[3] 391	[3] 273	[3] 78	[3] 55
1902	109,107	27,597	97	67	[3] 422	[3] 312	[4] 84	[4] 62
1903	106,989	30,994	95	76	460	356	92	71
1904	105,967	32,120	94	79	477	388	95	78
1905	113,255	34,205	101	84	466	401	93	80
1906	100,995	33,404	90	82	482	421	96	84
1907	96,100	32,643	86	80	488	426	97	85
1908	124,730	39,031	111	96	477	426	95	85
1909	112,522	34,160	100	84	490	441	98	88
1910	100.746	34,032	90	84	495	448	99	89
1911	115,565	39,679	103	97	489	458	98	91
1912	102,407	35,383	91	87	496	494	99	99
1913	117,881	42,676	105	106	522	540	104	108
1914	119,572	48,491	107	120	534	600	107	120
1915	130,431	52,855	116	130	582	717	116	143
1916	128,736	63,652	115	157	640	862	128	172
1917	....	....	[2] 139	[2] 204	[2] 696	[2] 993	[2] 139	[2] 198
1918	182,614	106,965	163	251	[2] 743	[2] 1,114	[2] 148	[2] 223
Average	112,239	40,247	....	....	....	....	....	....

[1] Obtained by dividing enrollment for each year by the *average* enrollment.
[2] Estimated
[3] This is the sum of the index numbers from 1900 to 1904, inclusive, etc.
[4] Columns 6 and 7 divided by 5, respectively.

The method used in securing these index numbers is shown in Table 3. The enrollment for each year is divided by the average enrollment for the years under consideration, giving the index numbers shown in columns 4 and 5 for day and night courses, respectively. By means of these index numbers the two curves are brought nearer each other in such a way that comparisons showing the rates of increase may be made. The relative steepness of the slopes of the two curves between any two consecutive points indicates the rate of change. Thus between 1916 and 1918 the curve for the night school enrollment shows a steeper slope than the curve for the day schools. Consequently a more rapid change in night school enrollment within this period has taken place.

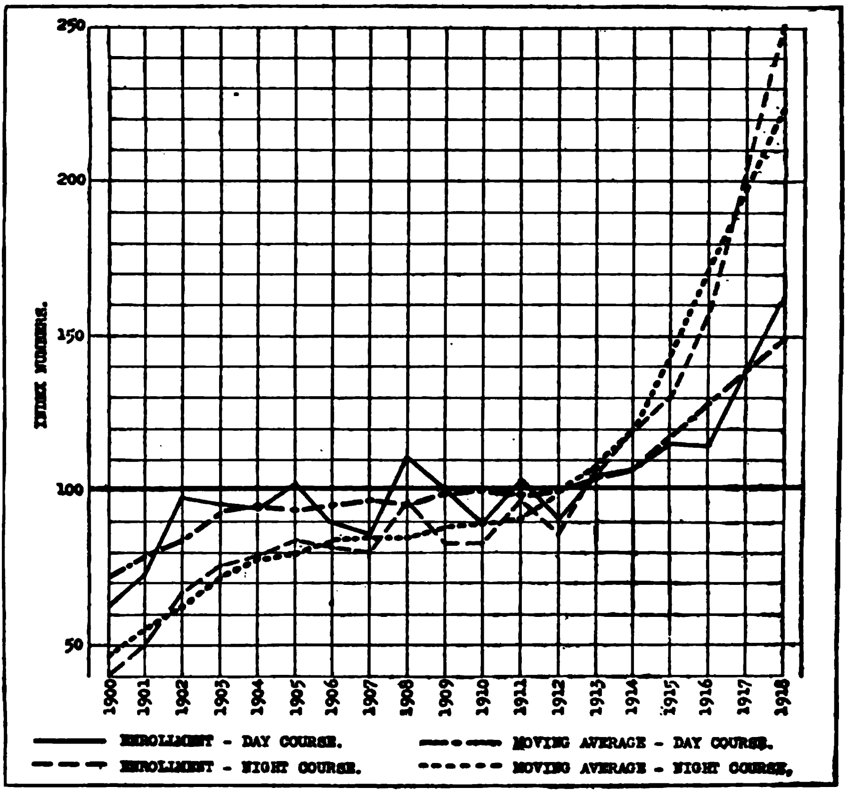

FIG. 6.—Index curves showing the rates of change in enrollment in day and night courses in private commercial schools, 1900–1918.

THE MOVING AVERAGE OF INDEX NUMBERS.

In both curves certain irregularities will be observed. Undoubtedly these low points are due more to the failure of commercial schools to submit reports than to any other factor. If all schools had reported each year presumably a more gradual rise would have appeared in the curves. To eliminate these fluctuations in the index curves, moving averages have been applied. The method employed in securing the points used in locating these moving rages is shown in Table 3. For example, to secure the point for the day school moving average in 1910 the corresponding index numbers for 1908 to 1912, inclusive, are added. In other words, 111, 100, 90, 103, and 91 are added to give the corresponding total for 1910 in column 6. This total of 495 is divided by 5, since 5 consecutive numbers have been used in securing it. The quotient, 99, is placed in column 8 and is used in locating the moving average for the day school in 1910. In a similar manner the other points are determined. It is necessary in computing the first two and the last two points in the series to repeat the index numbers at each end a sufficient number of times to secure the interval of 5 years. The two points on each curve at either end may be fictitious, therefore, since the data beyond the limits of the period under consideration have not been or could not be secured. It is assumed that the terminal numbers are repeated. By reference again to figure 6, it will be noted that the moving averages have only slight fluctuations and that the one for the night school rises more rapidly throughout the period under discussion than does the moving average for the day school. This means that the enrollment in night schools is increasing much more rapidly than enrollment in day schools. In fact, the enrollment in night schools since 1900 has increased 560 per cent, while the enrollment in day schools has increased only 157 per cent. Without doubt these percentages would not have been so large had not the war demands for commercial school graduates been so great.

AVERAGE ATTENDANCE IN DAY AND NIGHT SCHOOLS.

In figure 5 it is difficult to ascertain whether the per cent of average attendance is greater in day or night schools. To answer this question the per cent of average attendance for each year since 1905 has been computed for both day and night schools and the results inserted in Table 1. By reference to this table it will be found that the average attendance in the day schools varies from 40 per cent in 1906 to 47 per cent in 1914. Since the latter date a gradual decrease is shown. These percentages are significant, yet likely to be misconstrued. They do *not* mean that each student attends only 47 per cent of the time while he is in school. Of course, absence while in attendance cuts down the percentage, but it is doubtful if such absence amounts to as much as 10 per cent. On the other hand, these small percentages mean that in the "average" private commercial school the time required to complete the course is very short, even less than 6 months. Assuming that the capacity of an "average" commercial school is 200 students and an average attendance of 200 is reported and the total enrollment for the year is 400, evidently the "turnover" in the school during the year is 100 per cent. In other words, the student body must change once during the year. Consequently the "average" student would remain only 6 months in the institution. Allowing for absence while students are actually enrolled, the percentages given in Table 1 would undoubtedly be less than 50 per cent, and consequently the "average" student in private commercial schools does not remain longer than 6 months. The fact that some students are enrolled for a part of two consecutive years does not modify this conclusion, since consecutive reports show approximately the same percentages of "turnover" and since "leftovers" will be counted both in enrollment and average attendance. It is true that some students enter commercial schools but do not complete the course. This tendency makes the "turnover" greater than if all should remain to graduate. A sufficient allowance has probably already been made to compensate for withdrawals. A casual glance at columns 22, 23, and 25 in Table 20 will convince the reader that this conclusion is sound. An inspection of the graphs herein on tuition rates for all courses except the combined will reveal a central tendency in the bars representing 3½ to 6 months or 6½ to 9 months. These will be discussed later in this chapter. It is gratifying to note that in general there was a gradual increase in the percentage of average attendance from 1905 to 1914. After this date a decrease is evident.

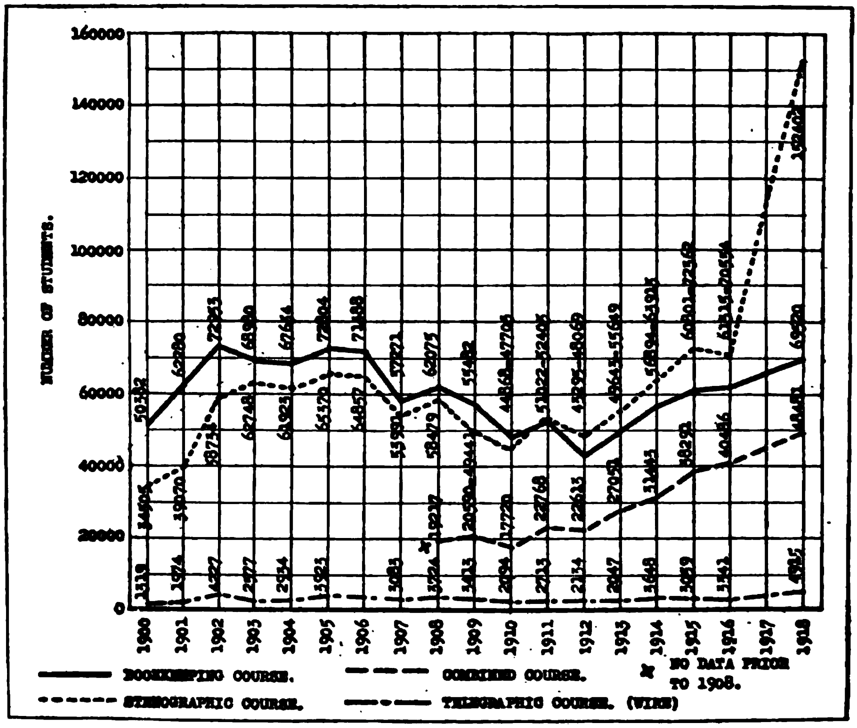

FIG. 7.—Enrollment in the leading courses of study offered by private commercial schools, 1900-1918.

In night schools no pronounced tendency is evident in the percentages of attendance given in Table 1. In 1918 the percentage is smaller than it has been since 1906. Few schools reported the time required for graduation from the night course; consequently, these items have not been tabulated in this report. From a casual inspection of the reports submitted, it appears that it takes about twice as long to complete the night course as the day course. Therefore, the percentages given for the night course in Table 1 show the "turnover" but afford no index as to the average time required to complete the night course.

ENROLLMENT BY COURSE OF STUDY.

It will be observed in figure 7 that a decided increase in the number of students enrolled in stenographic courses is shown in 1918. The number increased from 70,554 in 1916 to 152,402 in 1918, or 116 per cent. This abnormal increase has presumably been caused by the demand for stenographers on account of the war. The enrollment in the combined course which includes a study of shorthand also

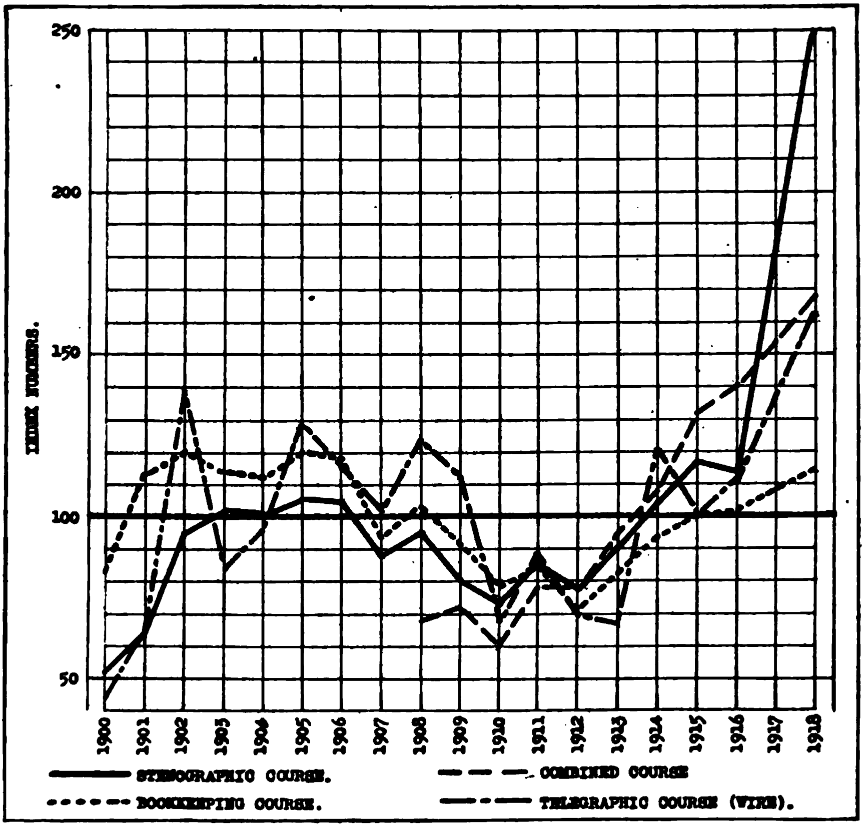

FIG. 7.—Index curves showing the rates of change in enrollment in the leading courses of study offered by private commercial schools, 1900–1918.

shows a gradual rise since 1910, but no very pronounced increase is evident in 1918. Evidently the demand for stenographers in 1918 was so insistent that few students would resist it long enough to complete both a stenographic and a bookkeeping course. The bookkeeping or commercial course shows in general a decrease from 1902 to 1912, and a gradual increase since that time. This course evidently did not receive a very great impetus on account of war conditions. The bookkeeping course in 1900 apparently was more popular than the other courses offered in private commercial schools. It continued to lead until 1911. Since 1911 the stenographic course has been decidedly the most popular.

Since the curves in figure 7 are so far apart, it is difficult to compare the increases in enrollment in the various courses offered. For example, was the increase in enrollment in the course in telegraphy (wire), from 1916 to 1918, proportionally as great as the correspond- increase in the combined or in the bookkeeping course? To answer such questions the enrollments given in figure 7 have been reduced to index numbers which are plotted in figure 8. From this graph it will be noted that the slope of the curve for the course in telegraphy (wire) is steeper between 1916 and 1918 than either of the curves for the bookkeeping or the combined course. The relative rate of increase has, therefore, been greater. However, for the same interval the curve for the stenographic course is steeper even than that for the course in telegraphy (wire). In the rate of increase in enrollment, therefore, between 1916 and 1918, the stenographic ranks first; the telegraphic, second; the combined, third; and the bookkeeping, fourth. Similar comparisons might be made between any other two consecutive intervals. It must be borne in mind that the relative positions of the curves do not indicate rates of increase. Only the slope or steepness of the curves shows the rate of increase. For example, between 1916 and 1918 the curve for the combined course stands above the "telegraphic" curve, but the latter shows the greater increase during this period. By means of index curves inconspicuous fluctuations in original curves running near the base of the graph are magnified in such a way as to make them comparable with the corresponding fluctuations in the original curves more centrally located in the graph of the absolute data. In other words, index curves facilitate comparisons which could not be made from the original graph.

TABLE 4.—*Method of computing the index numbers and the moving averages used in figure 8.*

Year.	Enrollment, by courses.				Index numbers for—[1]			
	Commercial.	Stenographic.	Combined.	Telegraphy (wire).	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire) course.
1	2	3	4	5	6	7	8	9
1900	50,382	34,505	....	1,319	83	52	....	44
1901	68,280	39,070	....	1,974	113	64	....	65
1902	72,953	58,734	....	4,227	120	95	....	139
1903	68,980	62,748	....	2,577	114	102	....	84
1904	67,654	61,923	....	2,934	112	100	....	96
1905	72,804	65,370	....	3,923	120	106	....	129
1906	71,488	64,857	....	....	118	105	....	[2] 116
1907	57,271	53,991	....	3,083	94	88	....	102
1908	62,075	58,479	19,217	3,724	103	95	68	123
1909	55,482	49,441	20,590	3,413	91	80	72	112
1910	47,703	44,868	17,720	2,094	78	73	60	69
1911	51,022	52,405	22,768	2,713	84	85	78	89
1912	43,295	48,069	22,613	2,134	71	78	78	70
1913	49,643	55,649	27,051	2,047	82	90	95	67
1914	56,894	63,915	31,443	3,648	94	104	108	120
1915	60,801	72,362	38,291	3,059	100	117	132	100
1916	61,315	70,554	40,486	3,341	101	114	140	111
1917	....	....	....	....	[2] 108	[2] 182	[2] 154	[2] 137
1918	69,520	152,402	48,481	4,915	114	250	168	162
Average	60,420	61,630	28,866	3,007	....	....	....	....

[1] Obtained by dividing enrollment for each year by the *average* enrollment.

[2] Estimated.

The method used in computing the index numbers used in figure 8 is shown in Table 4. The enrollment for each year is divided by the average enrollment in each course since 1900. The quotients obtained in this way are called "index" numbers and are used in locating the curves in the "index" graph. This method of showing rates of change has come into general use.

INSTRUCTORS.

As would naturally be anticipated, the curve representing the teaching staff as shown in figure 9 takes roughly the same general trend as the curve representing the student body shown in a previous graph. After 1912 a rapid rise is evident in each. In 1918, however, the increase in enrollment is much more pronounced than the increase in the teaching force, the former being approximately 50 per cent and the latter only 14 per cent. These percentages would indicate that private commercial schools in 1918 had an unusually large number of students enrolled, to each instructor employed. Evidently the teaching staff had a heavy "load" in 1917–18.

Another similarity exists between the "enrollment" curves and the "instructor" curves, viz, the curve representing the women gradually approaches the one representing the men, the former crossing the latter in the interval 1916 to 1918, in both curves. This condition means that a larger and larger percentage of instructors in private commercial schools are women. Undoubtedly the curves would not have crossed in 1918 had not the war called so many men into the Army. However, it is evident that there is a decided tendency for them to interchange positions, and unless some unforeseen counteracting influence appears they may retain in the future the relative positions now occupied. The slight exception to this tendency in 1915 and 1916 may be due to incomplete reports. Barring from consideration the unusual statistics for 1918, it is significant that there has been an increase of 184 per cent in the number of women teachers since 1900, but an increase of only 84 per cent in the number of men teachers.

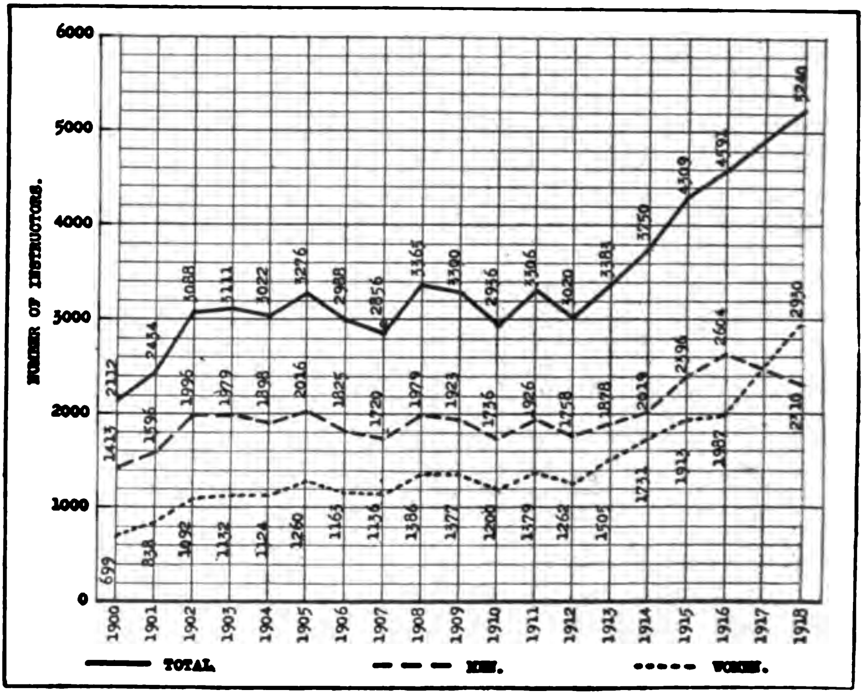

FIG. 9.—Number of instructors in private commercial schools, 1900–1918.

AVERAGE NUMBER OF STUDENTS PER INSTRUCTOR.

In order to show the number of students per instructor in private commercial schools the data given in figure 10 have been computed and arranged. The total number of students enrolled during the year was not used in ascertaining this distribution as the total enrollment for the year is usually more than twice the number actually present each day. To ascertain a fair average for the distribution, the average daily attendance in each school reporting such attendance was divided by the total number of instructors in corresponding schools. The quotients obtained were then arranged as shown in the figure. The result is what is known as a "skewed" distribution; that is, there are more measures on the right than on the left of the central tendency. The most common number of students to each instructor is from 16 to 20, inclusive. In all, 143 schools have this "load." Almost an equal number of schools (138) fall in the next higher group with a load varying from 21 to 25, inclusive. It is of interest to note that 476 schools, or 69 per cent of the total number of 690 schools reporting the data used in the construction of this distribution table, have from 11 to 30 students per instructor. While no attempt has been made to ascertain the exact range of the "middle half" of the distribution, it may be safely said the four bars included between the limits 11 and 30, inclusive, represent the "safety zone." Schools having a load of 10 or fewer students per instructor, or more than 30, may be in "danger zones." Possibly in certain types of commercial schools it may not be discreditable to fall in the extremes of the distribution. It may be added, however, that this graph does not include Y. M. C. A. schools, in which the enrollment per instructor is usually very large, nor denominational schools, in which the load is very small. Only purely nondenomina-

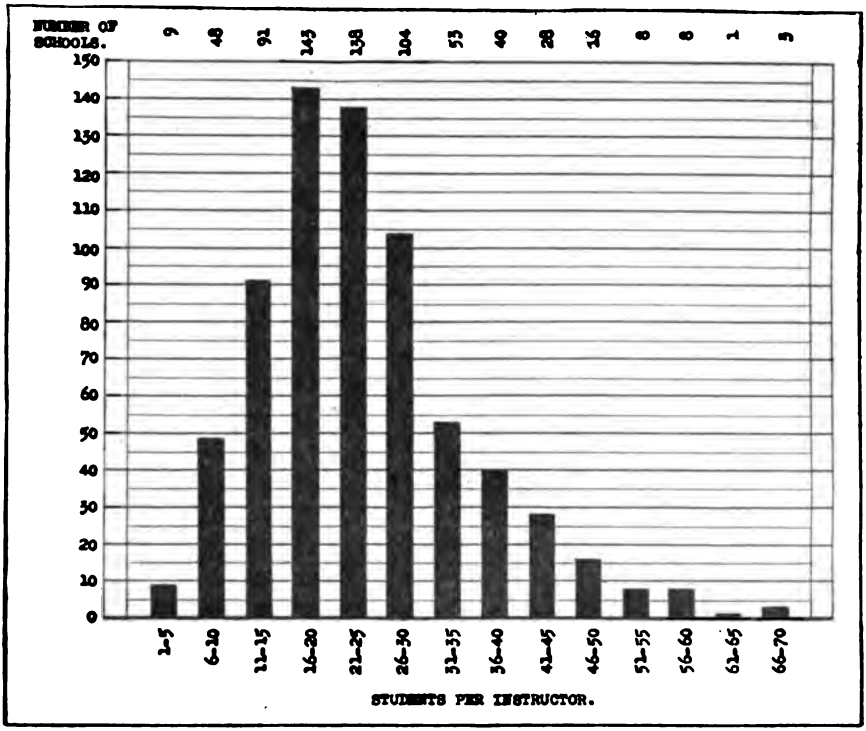

FIG. 10.—Average number of students per instructor in 690 private commercial schools, 1917–18.

tional private commercial and business schools have been used in the construction of the curve.

Several private commercial schools refused to report this year on the ground that other commercial schools exaggerated their enrollment in submitting a report. The skewed distribution shown in this graph seems to uphold the criticism offered by the few schools declining to report. If several schools reported an exaggerated attendance but the actual number of instructors, an asymmetrical distribution would result such as that shown in the bar diagram. At any rate, the lack of symmetry shows that there is a larger number of schools reporting an unusually large average number of students to an instructor than a small one. It may be added, further, that it is doubtful whether the most efficient instruction can be given when the average exceeds 45 students to an instructor.

It should be noted that the number of students per instructor is not the same as the average size of classes. If a school had 400 students in attendance each day and 20 instructors employed, each teacher would be charged with instructing an equivalent of 20 students daily in all subjects pursued by them. If each student had 5 recitations daily and each instructor 4 classes the size of each class would be 25.

The average daily attendance used in compiling this graph includes the average attendance in both day and night classes. Possibly some teachers give instruction to students in both kinds of classes. If such condition exists in any school, the fact still remains that the load for the instructors is the same as represented above. It would be advantageous for each school to ascertain its own location in the graph from the statistics incorporated in the following detailed tables. If it falls in the "danger zone" it should be able to justify its position both to the instructors employed and to the students taught.

LENGTH OF DAILY SESSION.

From figure 11 it will be noted that the most common length of the daily session is 5 hours or more, but less than 6 hours. A total of 355 schools fall in this group. The next group, almost as large, consisting of 253 schools, maintains a daily session of 6 hours or more, but less than 7 hours. Out of the 751 nondenominational private commercial and business schools reporting the length of the daily session, 608 hold a session of 5 or 6 hours. In other words, 81 per cent of such schools fall within the two long bars in the graph. The lack of symmetry of this distribution—not so pronounced, however, as that shown for the teaching load in the preceding graph—may partly nullify the assumption that a few schools reported an exaggerated enrollment, since with a heavy load teachers might be obliged to work "long" hours and not necessarily have large classes at any one time.

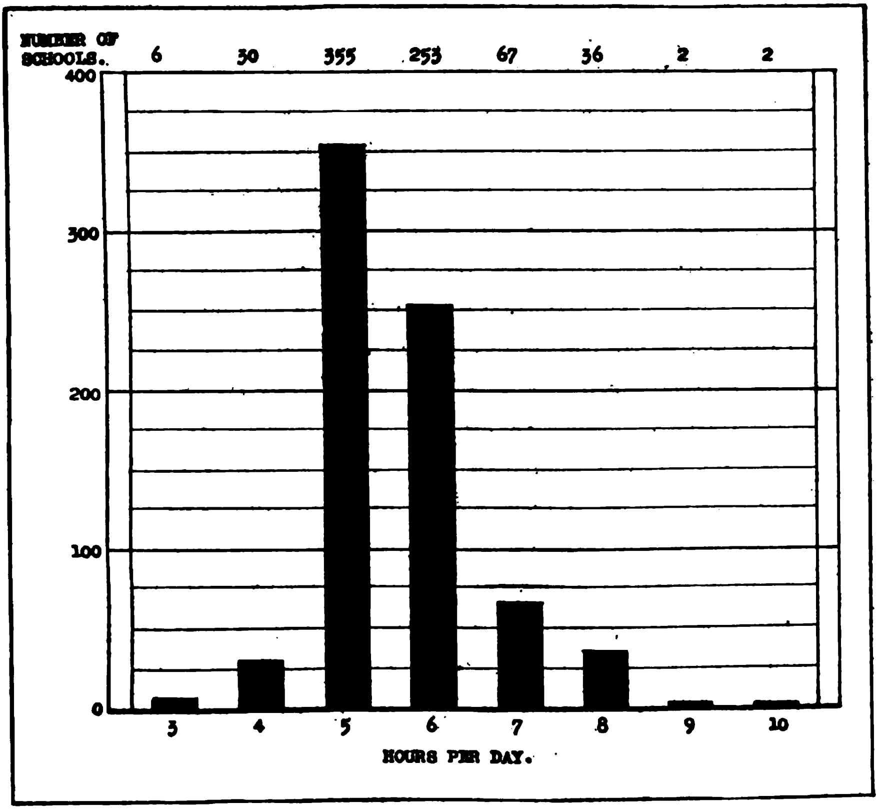

FIG. 11.—Length of the daily session in 751 private commercial schools, 1917-18.

This graph does not include the length of daily session in the night school. By reference to the detailed tables at the end of this chapter it will be observed that night classes are usually held for 2 or 2½ hours. In the schedule used in collecting information for this report no attempt was made to ascertain whether the students were obliged to remain for the entire day session, it being assumed that schools generally require attendance for the entire day. The assumption evidently is erroneous for schools holding a daily session of 8 hours or more.

TUITION FEES.

In the following pages an attempt has been made to study the tuition rates charged by private commercial schools. These rates vary with the nature of the course taken, and higher rates are charged for day than for night courses. Again, some schools charge a tuition rate by the month, and others require payment for the entire course. In most schools the student may pay either by the month or purchase a scholarship good for the entire course. In general, the cost of taking a course and paying by the month is greater than the cost of a scholarship, unless the student completes the course in a much shorter time than is ordinarily required. The data on which the following graphs are based are all tabulated in Table 20. This study of tuition rates does not include rates charged in Y. M. C. A. and denominational schools. In the following figures the integral number of dollars includes also any fractional part of the integer as well. Thus $9 includes $9 up to $9.99.

TUITION FEES IN THE DAY COURSE PER MONTH.

As will be noted from figure 12, the usual charge by the month for tuition for either the stenographic, the bookkeeping, the combined, or the telegraphic (wire) course varies from $9 to $16. The charge is usually $10, $12, or $15. A comparatively small number of schools charge a monthly tuition rate of $13, or $14, or fraction thereof, as indicated in the figure. Any school charging tuition rates designated by the two groups of bars on the extreme right of the graph must either offer a very high grade of instruction, maintain very long daily sessions, or else charge an unusually high rate of tuition. Conversely, schools charging only $5 to $8, inclusive, either offer an

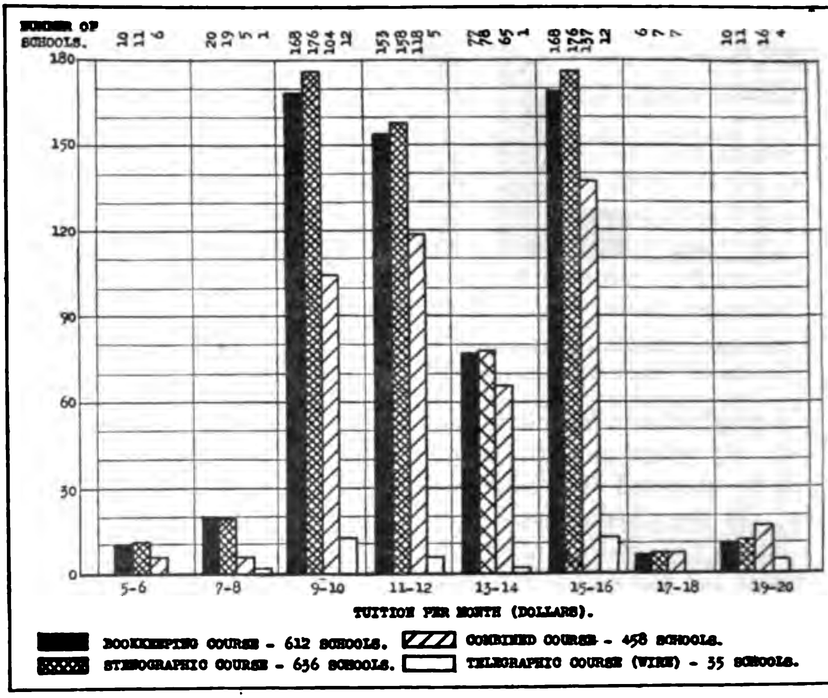

FIG. 12.—Tuition fee per month in the day course in private commercial schools, 1917–18.

inexpensive grade of instruction, maintain very short daily sessions, or charge unduly low tuition rates. This graph probably represents accurately the tuition rates charged by private commercial schools, since in it are given the tuition rates charged by 612 schools offering the commercial course, by 636 schools offering the stenographic course, by 458 schools offering the combined courses, and by 35 schools teaching wire telegraphy. It would be difficult, indeed, to assemble a more representative list of schools than has been included in this graph.

TUITION FEES IN THE NIGHT COURSE PER MONTH.

It will be observed in figure 13 that the usual tuition rates charged for the night course are lower than the corresponding rates for the day course, as shown in the preceding figure. In no case does the rate for the night course exceed $10 per month. The usual charge is $5, as shown in the graph. About half as many schools charge $6, or some fraction thereof, and a still smaller group charge only $4.

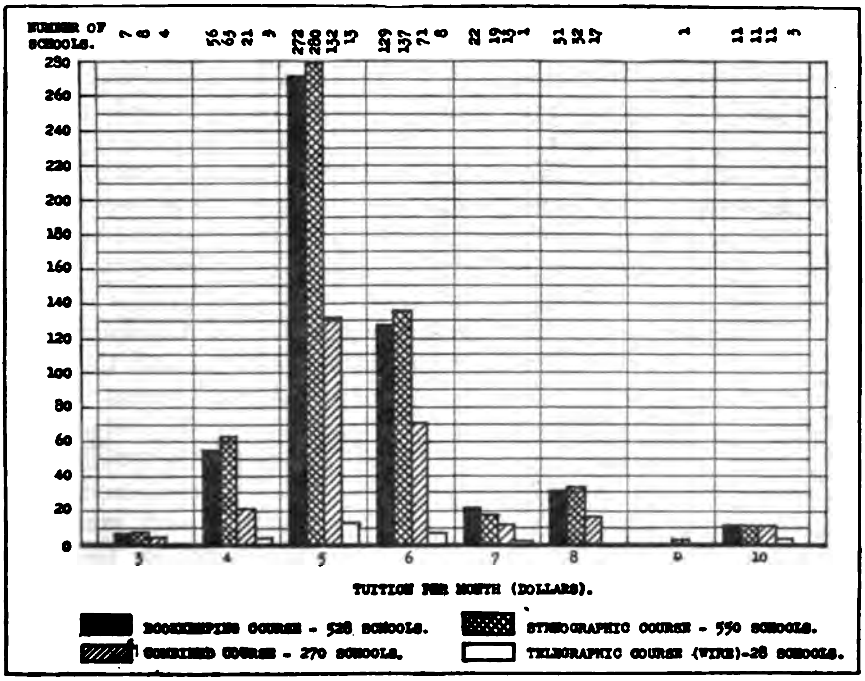

FIG. 13.—Tuition fee per month in the night course in private commercial schools, 1917–18.

A number of schools charge $7 to $10 for each course. It is of interest to note that the longest black bar, cross-hatched bar, and single-hatched bar, which represent the commercial, stenographic, and combined courses, respectively, fall in the same group of bars, viz, in the $5 group. One must conclude, therefore, that in general the same monthly charge is made for each of these three courses. The same conclusion might be made for the "telegraphic" bars, but as only 28 schools offer a night course in wire telegraphy, any deduction made might be subject to question. Any school charging tuition rates of $3, $7, $8, $9, or $10 falls in a "danger zone" in the graph.

TUITION RATES FOR ENTIRE DAY COURSES.

It was found more difficult to show graphically the tuition rates charged students for the entire course in the day school than it was to show the rate by the month, since the time required to complete the entire course varies in different schools and with the course pursued. For example, in one school it takes 12 months to complete the stenographic course, while in another it takes only 3 months. Evidently the former school will make the higher charge for tuition. To evade difficulties like these, the schools offering each course were divided into 5 groups. Group 1 includes all schools in which it was estimated that the course could be completed in 3 months or less; group 2, from 3½ to 6 months, inclusive; group 3, from 6½ to 9 months; group 4, from 9½ to 12 months; and group 5, from 12½ to 15 months. This grouping has not been done arbitrarily, as the schools seem to fall readily into this classification. For example, many schools estimate that 6 months are necessary for the completion of the course, others 6 to 8 months or 6 to 9 months. Where two limiting numbers have been reported, the average of the two has been used in locating the school in the graph. It will be noticed in the figures which follow that the majority of the schools fall in groups 2 and 3, the former group including the larger number for the commercial, the stenographic, and the telegraphic (wire) courses, and the latter leading in the combined course, as would naturally be anticipated. These facts verify the deduction drawn above that the average time required to complete a course in a private commercial school does not exceed 6 months. In this connection it must be remembered that a school does not always fall in the same group in each graph. A school might fall in group 3 when the tuition charge for the entire stenographic course is considered, but in group 5 when the charge for the combined course is considered.

TUITION RATES FOR THE ENTIRE COMMERCIAL OR BOOKKEEPING DAY COURSE.

A remarkable symmetry is evident in figure 14 in groups 2 and 3, showing that almost as large a proportion of schools charge a tuition rate in excess of the usual charge as charge a lower rate. A slight irregularity toward the right of the graph, in group 3, is apparent.

If lines were drawn joining the tops of corresponding bars, two almost perfect curves would be seen, each possessing remarkable symmetry. The slight rise at the right in the curve for group 3 shows that a few schools charge unusually high rates. The curve is slightly skewed in this direction. The highest curve represents the number of schools which offer a course requiring from 3½ to 6 months for completion and charge the tuition rates inserted just below the base line. This means that the largest number of schools (217) are included in group 2, and that the most customary charge for the entire bookkeeping course, covering a period from 3½ to 6 months, is from $60 to $69, inclusive. Schools charging higher or lower rates can not justify their charge on the ground that they offer a longer or a shorter course. In a similar way it is evident that the most usual charge made for this course by schools offering a course covering a period from 6½ to 9 months, inclusive, is from $70 to $79, inclusive. No central tendency is evident for schools falling in either groups 1, 4, or 5. The small number of schools in each group, viz, 11, 44, and 7, respectively, does not justify any deductions. It is evident, however, that several schools charge unusually high rates; 11 schools charging $130 or more for the course.

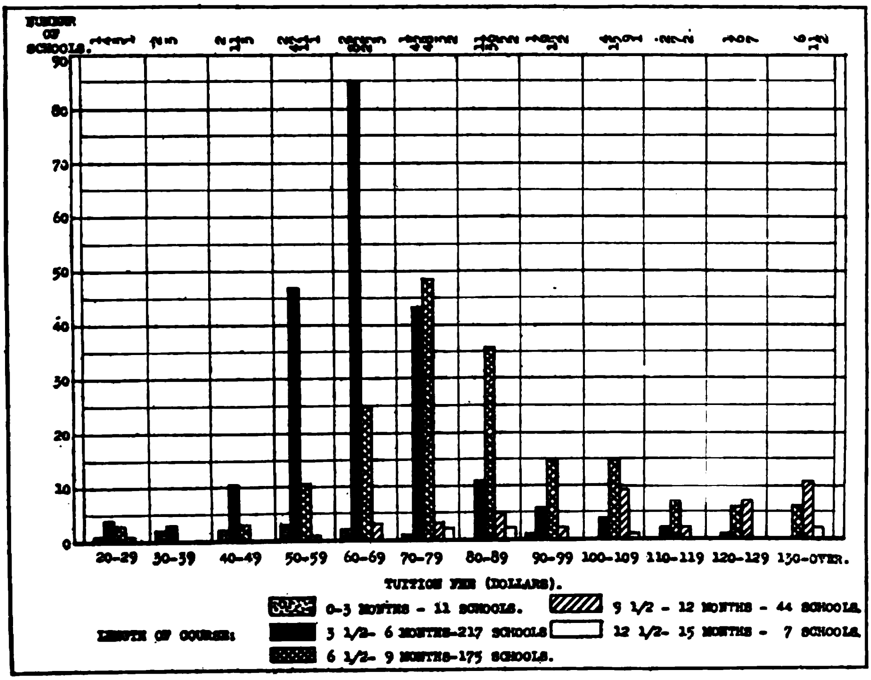

FIG. 14.—Tuition fee for the entire commercial or bookkeeping course in private commercial schools for the day course, 1917–18.

Altogether, 454 schools reported the tuition rate charged for the commercial or bookkeeping course. Of this number, 217 schools, or 48 per cent, offer a course extending from 3½ to 6 months; and 85 of these, or 39 per cent, charge a fee ranging from $60 to $69. Again, 175 schools, or 39 per cent of the total number reporting, maintain a 6½ to 9 months' course; and 48 of these, or 27 per cent, charge a fee of $70 to $79. Only 44 schools, or less than 10 per cent of the total number, offer a 9½ to 12 months' course, and the charge for tuition in most instances is over $100.

TUITION RATES FOR THE ENTIRE STENOGRAPHIC DAY COURSE.

Figure 15 contains two very symmetrical distributions similar to the corresponding ones in figure 14. In other words, groups 2 and 3 in this graph have almost the same number of schools charging lower or higher tuition fees than the rate indicated by the longest bar in the group. In the 3½ to 6 months' group the most common rate is $60 to $69, 88 schools charging this fee. In all, 64 schools charge a lower and 70 schools a higher rate than this. In the 6½ to 9 months' group 49 schools charge a tuition fee of from $70 to $79. Altogether, in this group 53 schools charge a lower and 95 a higher rate than this. Greater variation from the central tendency is shown in this group than in group 2. In other words, the distribution is slightly skewed

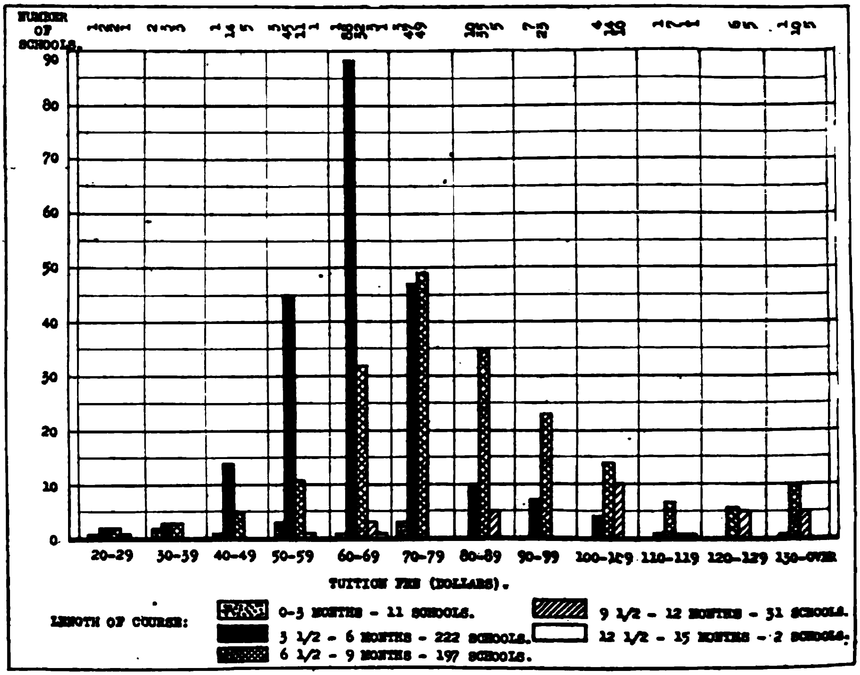

FIG. 15.—Tuition fee for the entire stenographic course in private commercial schools for the day course, 1917-18.

in the direction of higher tuition rates. Any school falling in this group and charging $110 or more for the course should be able to justify its action. The single-hatched bars representing group 4 in this graph show the same irregularity as the corresponding bars did in the next preceding graph. Likewise, groups 1 and 5 are small and consequently show no marked central tendency.

Altogether the tuition rates for the stenographic course in 463 schools are represented in this figure. Of this total, 222 schools, or 48 per cent, offer courses requiring from 3½ to 6 months for completion; and 197 schools, or 43 per cent, offer courses requiring from 6½ to 9 months for completion. In other words, 91 per cent of the schools represented in this graph fall in these two groups. This tendency to centralize around a 6 months' course further supports the statement made above that the "average" graduate from a private commercial school has had only six months of training.

TUITION RATES FOR THE ENTIRE COMBINED DAY COURSE.

As it takes about twice as long to complete the combined course as either the bookkeeping or the stenographic course, a higher scholarship fee is necessarily charged. In figure 16 it will be observed that

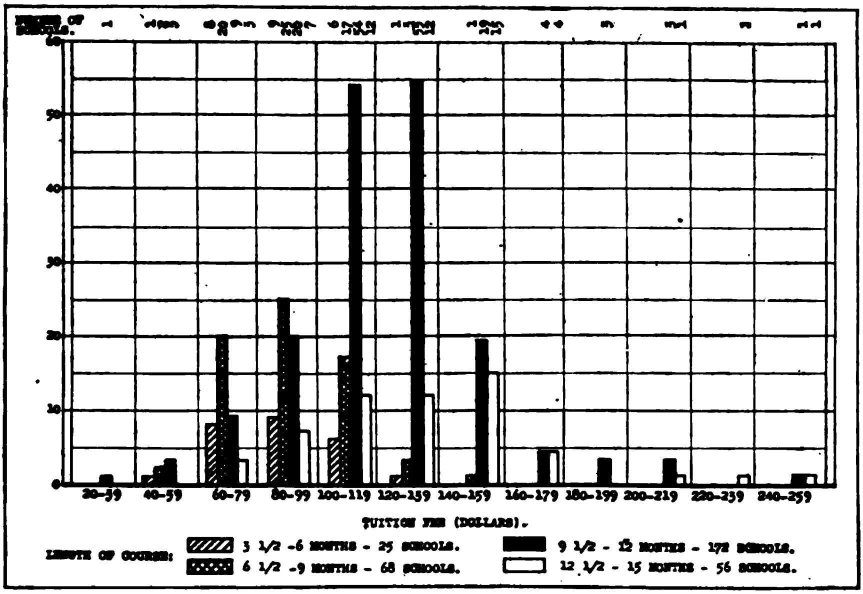

FIG. 16.—Tuition fee for the entire combined course in private commercial schools for the day course, 1917–18.

no schools undertake to give this course in three months or less, consequently, group 1 is not represented. There are relatively fewer schools in groups 2 and 3 than in the two graphs next preceding. The majority of the schools are found in group 4; that is they require from 9½ to 12 months for the completion of the course. Altogether, 321 schools reported the scholarship fee charged for the combined course. Of this number, 172 schools, or 54 per cent, fall in group 4. The customary fee charged students in schools of this type for this course is from $100 to $139, inclusive. Only 30 schools charge a higher rate, while 33 charge a lower rate. In the schools in group 5, that is in schools offering a course requiring from 12½ to 15 months for completion, the largest group of schools charge from $140 to $149. Two other groups almost as large, consisting of 12 schools each, charge $100 to $119 and $120 to $139, respectively. It will be noticed that remarkable symmetry is evident for the single-hatched, double-hatched, and black bars. A tendency for a few schools to charge an unusually high fee is shown in the isolated bars at the right.

In addition to the schools listed in figure 16, 12 schools offer a combined course extending from 16 to 42 months and charge tuition fees varying from $60 in one school to $270 in another. Only 3 schools have a course longer than 18 months, and 5 offer an 18 months' course. The usual charge for the course ranges from $110 to $180.

TUITION FEE CHARGED FOR THE ENTIRE DAY COURSE IN WIRE TELEGRAPHY.

As will be noted in figure 17, only 25 schools reported the scholarship fee charged for the entire day course in wire telegraphy. No schools appear in groups 1, 4, or 5. In all, 19 schools offer a course requiring from 3½ to 6 months to complete it, and 6 schools give a

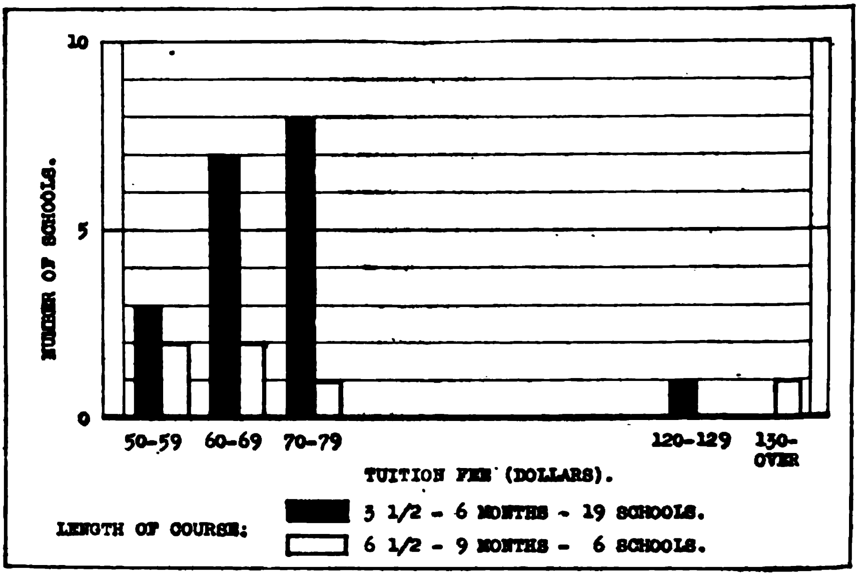

FIG. 17.—Tuition fee for the entire telegraphic (wire) course in private commercial schools for the day course, 1917-18.

6½ to 9 months' course. In the former group 3 schools charge from \$50 to \$59; 7 schools, \$60 to \$69; 8 schools, \$70 to \$79; and 1 school, \$120 to \$129. The most usual fee is from \$60 to \$79. The fee charged for the longer courses varies from \$50 to \$130 and over, no central tendency or customary fee being evident.

TUITION FEES CHARGED FOR OTHER COURSES.

By reference to detailed Tables 14, 15, 16, and 17, the tuition fees charged by individual schools for courses in wireless telegraphy, accountancy, secretarial course, and course in salesmanship, respectively, will be found. Since these groups are small, nothing would be gained by presenting the data graphically. In these tables the tuition fee charged is shown for both day and night courses by the month and for the entire day course. The number of months usually required for completing the entire day course is given in these respective tables. A casual inspection of these detailed tables shows that there is no customary charge for the entire day course and no usual time required for completing it. In fact, these courses have not become generally standardized, and time required for completing them may be either long or short and the tuition rate low, high, or even exorbitant. Frequently no data have been submitted.

SHORTHAND SYSTEMS TAUGHT.

On the schedule used in collecting data for this report the following question was asked, "What systems of shorthand do you teach?" On the blank the schools also reported the total number of students taking the stenographic course. From the replies to these two questions and from the published tabulation of the replies to the first question in 1916, Table 5 has been made and the following graphs have been constructed and conclusions drawn therefrom. Table 5 represents a mass of data which is very difficult to comprehend without the use of the graphic presentations following.

In 1918, 53 different systems of shorthand were reported. Fourteen systems which were reported in 1916 were not reported in 1918, and 11 new systems were reported in 1918. It may be added that this study of shorthand systems taught includes all schools reporting, both nondenominational and denominational.

As it is impossible to ascertain from the blank used in collecting the data just how many students are taking each system of shorthand in all schools reporting it is thought advisable to consider in the following pages the schools teaching one system only as well as those teaching one or more systems. From the one-system schools the number of students enrolled in each system can be ascertained, while this information is not available for the different systems in schools teaching more than one system. Figure 18 enables the reader to ascertain at a glance the relative number of schools included in each classification.

TABLE 5.—*Shorthand systems taught and students in stenographic courses in 840 private commercial and business schools in 1917–18.*

Systems taught.	Statistics of schools teaching only the one system mentioned in column 1.								Statistics of schools teaching system mentioned and one or more other systems.			Statistics of schools teaching only the system mentioned, or that system and one or more other systems.						
	Number of schools.	Per cent of total.	Number in 1916.	Per cent of total in 1916.	Number reporting students in stenographic course.	Students in stenographic course.		Average enrollment in stenographic course.	Number of schools	Number reporting students in stenographic courses.	Students in stenographic courses.	Number of schools	Per cent of the 809 schools reporting systems taught.	Number in 1916.	Per cent of the 701 schools reporting systems taught in 1916.	Number reporting students in stenographic courses.	Students in stenographic courses with opportunity to take system named.	Per cent of total students (149,124) in stenographic courses.
						Number.	Per cent of total.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Aristos or Jaynes Shadeless	2	0.4	......	......	2	472	0.56	236	0	0	0	2	0.2	......	......	2	472	0.32
Barnes-Pitman*	8	1.4	11	2.3	8	892	1.06	112	6	6	1,687	14	1.7	15	2.1	14	2,579	1.73
Benedict	0	0	......	......	0	0	.00	0	1	1	67	1	.1	......	......	1	67	.04
Boyd Syllabic	8	1.4	7	1.5	6	991	1.18	165	1	1	65	9	1.1	8	1.1	7	1,056	.71
Burnz Phonetic*	1	.2	1	.2	1	225	.27	225	0	0	0	1	.1	1	.1	1	225	.15
Byrne Simplified	8	1.4	4	.9	8	1,410	1.67	176	2	2	83	10	1.2	5	.7	10	1,493	1.00
Byrne Stenotypewriting	0	.0	0	.0	0	0	.00	0	1	1	179	1	.1	1	.1	1	179	.12
Chandler	2	.4	1	.2	2	45	.05	23	0	0	0	2	.2	1	.1	2	45	.03
Churchhill (Simplis)	2	.4	1	.2	2	54	.05	27	0	0	0	2	.2	1	.1	2	54	.03
Creager*	1	.2	1	.2	1	149	.18	149	0	0	0	1	.1	1	.1	1	149	.10
Dement's Aristography*	2	.4	1	.2	2	258	.31	129	0	0	0	2	.2	1	.1	2	258	.17
Dement-Pitmanic*	4	.7	2	.4	3	544	.65	181	2	2	605	6	.7	5	.7	5	1,149	.77
Diagram Method (Improved Pitman)*	1	.2	1	.2	1	24	.03	24	0	0	0	1	.1	1	.1	1	24	.02
Davidson's Graphic	1	.2	1	.2	1	102	.12	102	0	0	0	1	.1	1	.1	1	102	.07
Day-Graham*	1	.2	1	.2	1	10	.01	10	0	0	0	1	.1	2.	.3	1	10	.01
Dougherty*	1	.2	......	......	1	249	.29	249	0	0	0	1	.1	......	......	1	249	.17
Eclectic (Cross or Chartier)*	4	.7	7	1.5	4	80	.09	20	5	4	448	9	1.1	14	2.0	8	528	.35
Georgia-Alabama Business Shorthand	1	.2	......	......	1	230	.27	230	0	0	0	1	.1	......	......	1	230	.15
Graham*	31	5.7	32	6.7	28	4,473	5.36	160	43	41	11,519	74	9.2	72	10.3	69	15,992	11.24
Graham-Pitman*	11	2.0	8	1.7	11	2,411	2.86	219	10	10	5,471	21	2.6	14	2.0	21	7,882	5.28

Gregg	291	53.2	202	42.1	273	44,856	53.80	164	229	217	61,227	520	64.4	384	54.8	490	106,083	71.14
Havens*	1	.2	1	.2	1	166	.20	166	0	0	0	1	.1	1	.1	1	166	.11
Heyenga	1	.2	1	.2	1	16	.01	16	0	0	0	1	.1	1	.1	1	16	.01
Improved Pitmanic*	1	.2	1	.2	1	87	.10	87	0	0	0	1	.1	1	.1	1	87	.06
Kimball	0	.0	0	.0	0	0	.00	0	1	0	0	1	.1	1	.1	0	......	......
Lindsleys Takigraphy	1	.2	1	.2	1	16	.19	16	0	0	0	1	.1	1	.1	1	16	.01
McEwan*	1	.2	1	.2	1	90	.10	90	0	0	0	1	.1	1	.1	1	90	.06
Modern Pitmanic*	1	.2	0	.0	1	4	......	4	1	1	1,151	2	.2	2	.3	2	1,155	.72
Mosher	2	.4	1	.2	2	332	.39	166	1	1	340	3	.4	1	.1	3	672	.45
Munson*	13	2.4	22	4.6	13	2,244	2.69	178	27	26	8,084	40	5.0	42	6.0	39	10,328	6.92
National Shorthand Machine	0	.0	......	......	0	0	.00	0	15	15	4,619	15	1.9	......	......	15	4,619	3.09
Osgoodby-Pitmanic*	1	.2	1	.2	1	65	.07	65	0	0	0	1	.1	1	.1	1	65	.04
Paragon	3	.5	0	.0	2	327	.39	164	1	1	57	4	.5	1	.1	3	384	.26
Pernin (Progressive)	5	.9	6	1.2	5	301	.35	60	3	3	441	8	1.0	8	1.1	8	742	.50
Pitman (text not stated)	12	2.2	11	2.3	10	1,140	1.33	114	64	60	13,456	76	9.4	68	9.7	70	14,596	9.78
Pitman, Benn*	46	8.4	60	12.5	43	6,603	7.92	154	34	34	10,219	80	9.9	85	12.1	77	16,822	11.27
Pitman-Harrell*	1	.2	1	.2	1	202	.24	202	0	0	0	1	.1	1	.1	1	202	.14
Pitman-Howard*	7	1.2	12	2.5	6	712	.85	119	10	10	991	17	2.1	22	3.1	16	1,703	1.14
Pitman, Isaac*	45	8.2	39	8.1	39	10,941	13.10	281	40	39	7,744	85	10.5	65	9.3	78	18,685	12.53
Pitman-Schoch*	0	.0	......	......	0	0	.00	0	1	1	1,107	1	.1	......	......	1	1,107	.74
Porter's Stem-vowel*	1	.2	......	......	0	......	......	......	0	0	0	1	.1	......	......	0	......	......
Rowe (McKee's New Rapid)*	4	.7	4	.8	4	276	.32	69	4	4	601	8	1.3	11	1.6	8	877	.60
Scientific*	1	.2	......	......	1	99	.11	99	1	1	20	2	.2	......	......	2	119	.08
Simplified Pitman*	1	.2	1	.2	1	132	.15	132	0	0	0	1	.1	1	.1	1	132	.09
Sloan-Duployan	0	.0	......	......	0	0	.00	0	1	1	698	1	.1	......	......	1	698	.47
Speedwa (Chartier)	2	.4	0	.0	2	120	.14	60	7	6	1,466	9	1.1	2	.3	8	1,586	1.06
Spencerian	9	1.6	12	2.5	9	535	.64	59	14	13	1,750	23	2.8	22	3.1	22	2,285	1.53
Spencerian-Chartier	3	.5	4	.8	3	383	.45	128	0	0	0	3	.4	4	.6	3	383	.26
Stein (Improved Pitman)*	1	.2	1	.2	1	33	.04	33	0	0	0	1	.1	1	.1	1	33	.02
Stenotype	0	.0	0	.0	0	0	.00	0	54	53	13,094	54	6.7	72	10.3	53	13,094	8.78
Success*	4	.7	8	1.7	4	1,113	1.33	278	6	6	2,678	10	1.2	11	1.6	10	3,791	2.58
Underhill*	0	.0	0	.0	0	0	.00	0	1	1	100	1	.1	1	.1	1	100	.07
Universal*	0	.0	......	......	0	0	.00	0	1	1	94	1	.1	......	......	1	94	.06
Other systems,[1] 1916 only	......	......	11	2.3	......	......	......	......	......	......	......	......	......	21	3.1	......	......	......
Totals and averages	547	100.0	480	100.0	509	83,412	100.00	164	[2]587	[2]562	[2]150,061	[3]1,134	......	[4]975	......	1,071	[3]233,473	......

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*Considered as Pitman systems in the following discussion and graphs.

[1] 14 shorthand systems reported in 1916 were not reported as being taught in 1918. This table includes 12 shorthand systems not reported in 1916. Several duplicates listed in 1916 have been avoided in this table.

[2] Only 262 schools reported two or more systems of shorthand, hence the 587 includes 325 duplicates. Of the 262 schools, 250 reported a total enrollment of 65,712 students in the stenographic courses. The totals (562 and 150,061) above include, therefore, duplicates of 312 and 84,349, respectively.

[3] See footnote (2) for explanation of the duplication involved in these grand totals. In addition to the 1,134 schools, 31 other schools reported shorthand classes but did not name the systems taught. Of these 31 schools, 30 reported 5,615 students enrolled in stenographic courses not included in the grand total of 233,473. Only 50 schools did not report a stenographic course or shorthand system taught.

[4] This total includes 274 duplicates.

NUMBER OF SHORTHAND SYSTEMS TAUGHT IN EACH SCHOOL.

By reference to this figure it will be noted that 50 schools reporting did not teach shorthand in 1918; 547 taught only one system; 202, two systems; 38, three systems; 11, four systems; 2, five systems; 1, six systems; 8 replies were indeterminate; and 31 schools did not report the names of the systems taught, although they offered shorthand courses. Eliminating from consideration all schools not reporting the exact number of systems taught or not offering stenographic courses, it is found that 68 per cent of the 801 schools reporting such information offered only one system of shorthand. In 1916, out of a total of 701 schools reporting corresponding data, 480 schools, or 68 per cent, taught only one system. Apparently, therefore, there has been no change since 1916 in the relative number of schools teaching only one system of shorthand. Eliminating the 50 schools not teaching shorthand, the 8 schools whose replies were indefinite, and the 31 schools not reporting the systems taught, it is

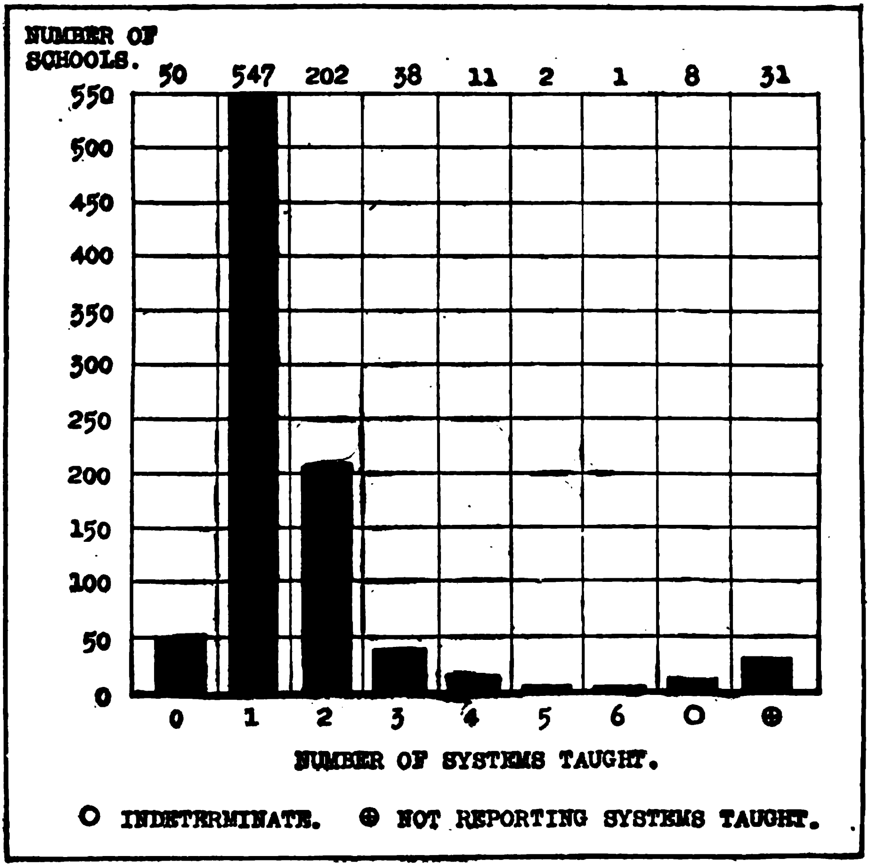


FIG. 18.—Number of systems of shorthand taught in 890 private commercial schools, 1917-18.

found that 93 per cent, or practically all commercial schools in 1918, teach only one or two systems of shorthand.

WHAT SYSTEMS THE LARGEST SCHOOLS TEACH.

It is of special interest to know what systems of shorthand the largest schools teach. To answer this question figure 19 has been prepared. It was found that 76 schools enrolled 500 students or more in the stenographic course and these schools were arbitrarily chosen for the construction of this figure. Of the 76 schools, 44 taught only one system, and 32, two or more systems of shorthand. It should be remembered, however, that the number (500) is about twice as large as the number actually present at any one time in the schools chosen for this graph, since the student body in the stenographic course usually changes twice during the year. Consequently, all private commercial schools enrolling approximately 250 students or more at any one time in the stenographic course have been included. The black section of the bars contain many duplicates, since a school may teach the Gregg, one or more of the Pitman systems, and possibly a machine system. This statement applies only to the schools represented by the black section of the bars, which

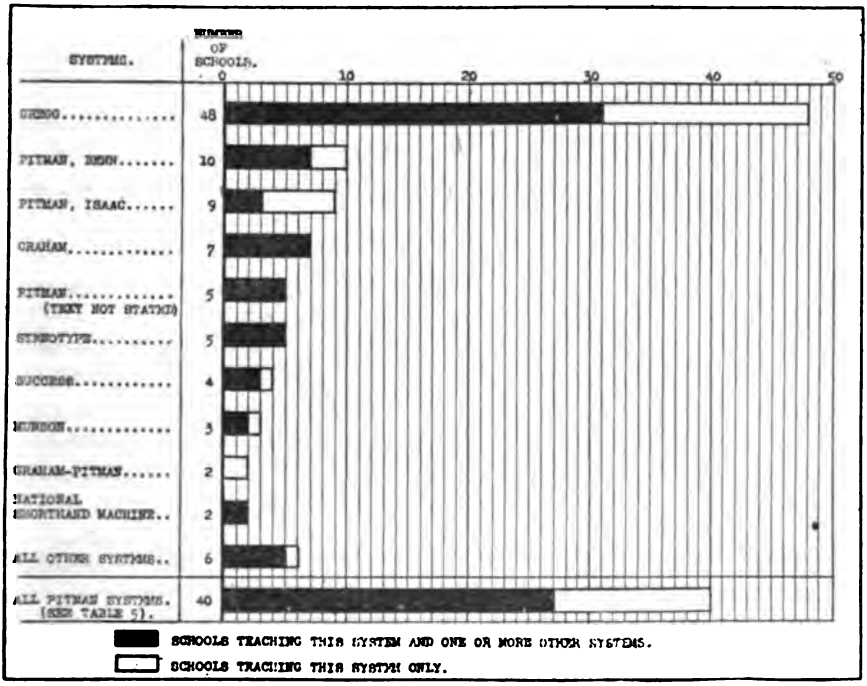


FIG. 19.—The systems of shorthand taught by the 76 private commercial schools enrolling 500 students or more in the stenographic course, 1917-18.

indicates schools teaching this system and one or more other systems. Thus, the 31 schools teaching the Gregg, shown by the black bar, are duplicated in the other systems specifically indicated and many of them also in the bar, "All Pitman Systems." The bar, both black and white, representing "All Pitman Systems," is wholly duplicated in the Pitman systems definitely named above it or in the "catch-all" phrase, "All other systems." The white section of the bars represents schools teaching only one system of shorthand and contains no duplication except in the second bar from the top as just explained.

The Gregg is taught in the largest number of large schools; viz., 48 schools. If all duplicates are eliminated from the systems considered as Pitmanic, as indicated in Table 5, it is found that 40 different schools teach a Pitman system or a system based on Pitman Among the Pitman systems the Benn Pitman and the Isaac Pitman lead with 10 and 9 schools respectively.

In all, 17 schools teach the Gregg exclusively and 13 others a Pitman system.

It is found that the machine shorthand systems are also represented here, 5 schools teaching the stenotype and 2 schools the National shorthand machine. The machine method is not used exclusively in any school reporting.

All systems which are taught in 2 or more of these large schools have been named specifically in the graph. Six schools grouped together in the last bar teach one system each, viz, the Barnes-Pitman, Dement-Pitmanic, Pitman-Schoch, the Modern Pitmanic, and Sloan-Duployan, each of which is taught in connection with some other system, and the Byrne Simplified which is taught exclusively in one large school. The first four systems just named and considered herein as Pitman have been included also in the second bar, "All Pitman Systems."

AVERAGE ENROLLMENT IN THE STENOGRAPHIC COURSE IN SCHOOLS TEACHING ONE SYSTEM OF SHORTHAND.

It is not sufficient to show the number of large schools teaching each system, since only the exceptional schools are considered. To show the average size of classes in shorthand for the 12 leading systems, figure 20 has been prepared. It should be remembered, however, that these averages are almost twice as large as the average enrollment in shorthand courses at any one time, since the student body changes approximately twice during the year.

In Table 5, column 9, the average enrollment in stenographic courses offered in one-system schools is shown. These averages are obtained by dividing the total enrollment in such courses by the corresponding number of schools teaching each system. It is almost impossible and not very desirable to show graphically the average enrollment in stenographic courses for all the different systems of shorthand taught. Consequently, the 12 systems most generally taught by all private commercial and business schools have been selected for study. These 12 systems are the only ones taught in 1 or more than 1 per cent of the schools teaching one system only as shown in Table 5, column 2. It is found, as will be observed in figure 20, that the Isaac Pitman system ranks highest in this score, with an average enrollment of 281 students in shorthand courses in one-system schools.

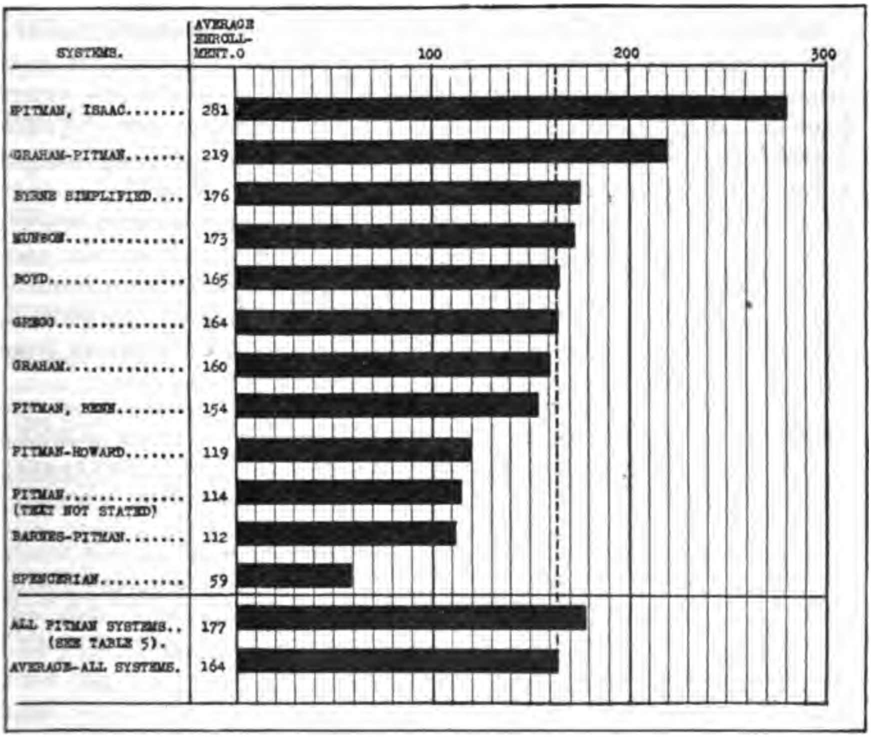


FIG. 20.—Average enrollment in the stenographic course in private commercial schools teaching only one system of shorthand—for the 12 systems most frequently given, 1917–18.

The Graham-Pitman shows an average of 219; the Munson, an average of 173; and the Gregg, an average of 164. The average for all Pitman systems is 177, and for all systems is 164, the same as that for the Gregg. Undoubtedly, the average is determined very largely by the Gregg, as 53.8 per cent of all students in stenographic courses in one-system schools are taking the Gregg system of shorthand.

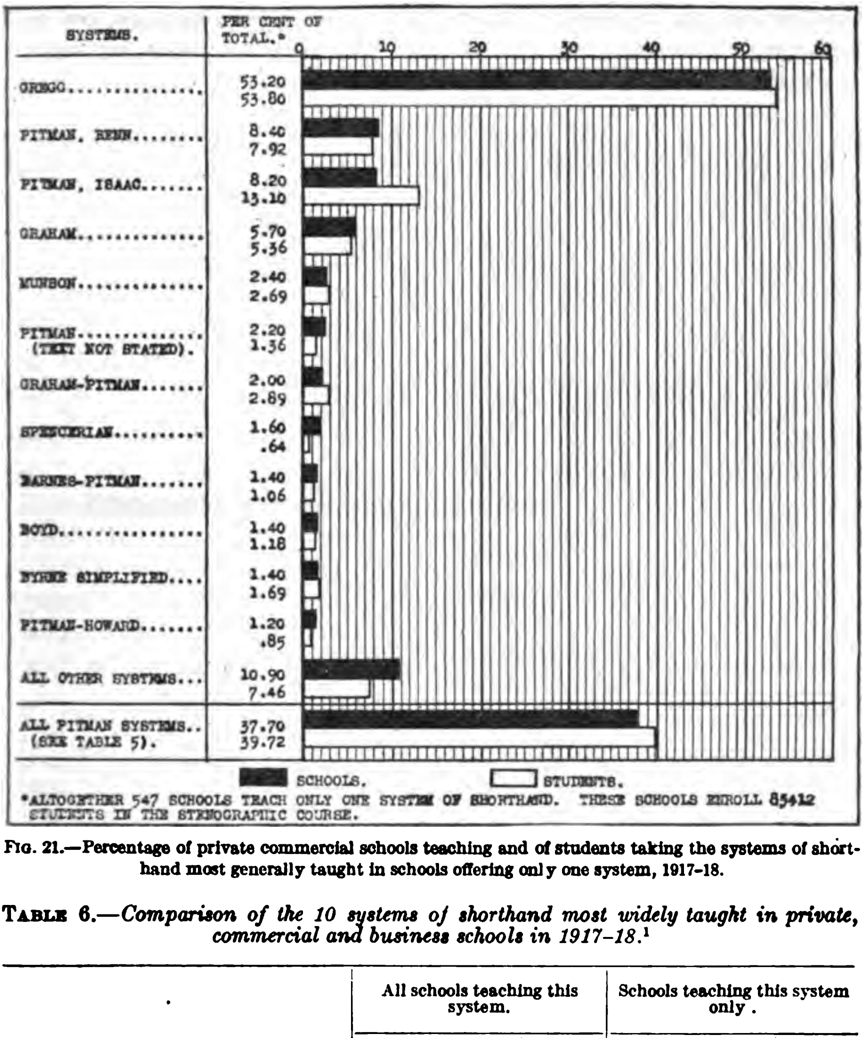
From column 1, Table 5, it is found that the averages used in this graph have been secured by using the total number of one-system schools reporting. In the case of the Pitman-Howard, only 7 schools reported one system of shorthand. It is possible that the average used for this system is not representative. Similarly, the averages for the Barnes-Pitman, the Boyd, the Byrne Simplified, and the Spencerian may not be accurate, since only 8, 8, 8, and 9 schools, respectively, reported these systems only. In securing all other averages at least 11 schools were used. In each case, however, the total number of schools reporting enrollment in one system only was used, and, consequently, it is doubtful if more representative averages could be secured.

AVERAGE ENROLLMENT FOR THE YEAR IN STENOGRAPHIC COURSES.

It has been remarked above that the average enrollment for the year in stenographic courses in one-system schools is 164. It is of interest to compare this average with that of two-or-more-system schools. If the total enrollment in the stenographic courses in such schools, 66,712, is divided by the number of such schools (262) a quotient of 255 is obtained. It is seen, therefore, that the average enrollment in the stenographic course in two-or-more-system schools is 55 per cent higher than the corresponding enrollment in one-system schools. The average for all schools teaching shorthand is 184 students (149,124 students divided by 809 schools). In general, it is shown in the following pages that any conclusion drawn from the data on either type of school applies also to the other.

PERCENTAGE OF STUDENTS TAKING AND OF ONE-SYSTEM SCHOOLS TEACHING THE 12 SYSTEMS OF SHORTHAND MOST GENERALLY TAUGHT IN 1918.

The black bars in figure 21 show the percentage of schools teaching each of the 12 leading systems of shorthand in schools offering only one system in 1918. Altogether, 547 schools teach only one system of shorthand. It is found in Table 5, column 2, that 53.2 per cent of these schools teach the Gregg system; 37.7 per cent, some Pitman system; 8.4 per cent the Benn Pitman; 8.2 per cent, the Isaac Pitman; and so on as shown in the graph. In all, 83,412 students in stenographic courses were reported by these 547 schools teaching only one system of shorthand. Of this number 53.8 per cent were taking the Gregg; 39.72 per cent, some Pitman system: 13.10 per cent, the Isaac Pitman; 7.92 per cent, the Benn Pitman, etc. It will be observed that the 12 systems are ranked in the order of magnitude of the black bars representing the number of schools. It is preferable to have the percentage of schools rather than the percentage of students determine the order of precedence since in figure 23, where only the number of schools is used, the same order will be maintained and the same systems represented. It is remarkable that the black and the open bars show so much similarity in their relative lengths.



*ALTOGETHER 547 SCHOOLS TEACH ONLY ONE SYSTEM OF SHORTHAND. THESE SCHOOLS ENROLL 85412 STUDENTS IN THE STENOGRAPHIC COURSE.

FIG. 21.—Percentage of private commercial schools teaching and of students taking the systems of shorthand most generally taught in schools offering only one system, 1917-18.

TABLE 6.—*Comparison of the 10 systems of shorthand most widely taught in private, commercial and business schools in 1917–18.*[1]

Systems of shorthand.	All schools teaching this system.			Schools teaching this system only.		
	Percentage of all schools reporting systems taught.		Per cent of increase (+) or decrease (—).	Percentage of all schools teaching one system only.		Per cent of increase (+) or decrease (—).
	In 1916.	In 1918.		In 1916.	In 1918.	
1	2	8	4	5	6	7
Graham	10.3	9.2	−10.7	6.7	5.7	−14.9
Graham-Pitman	2.0	2.6	+30.0	1.7	2.0	+17.6
Gregg	54.8	64.4	+17.5	42.1	53.2	+26.4
Munson	6.0	5.0	−16.7	4.6	2.4	−47.9
Pitman (text not stated)	8.7	8.5	−2.3	2.3	2.2	−4.4
Pitman, Benn	12.1	9.9	−19.0	12.5	8.4	−32.8
Pitman-Howard	3 1	2.1	−32.2	2.5	1.2	−52.0
Pitman, Isaac	9.3	10.5	+12.9	8.1	8.2	+1.2
Spencerian	3.1	2.8	−9.7	2.5	1.6	−36.0
Stenotype	10.3	6.7	−34.9	.0	.0	....
All Pitman systems	....	....	....	47.3	37.7	−20.3

[1] Each system is taught in at least 17 schools, or in 2 per cent of all schools reporting the systems taught.

INCREASE OR DECREASE SINCE 1916 IN THE PERCENTAGE OF ONE-SYSTEM SCHOOLS TEACHING THE 12 SYSTEMS MOST GENERALLY TAUGHT IN 1918.

In 1916 no statistics were published showing the number of students taking each system of shorthand offered in one-system schools. It is more desirable to show whether each system has gained or lost students since 1916 than to show whether there has been an increase or decrease in the percentage of schools offering each of the 12 leading systems. The former condition can not be shown, as comparative data are not available. In the preceding paragraph, however, it was pointed out that a great similarity exists between the percentage of schools offering and of students taking each system.

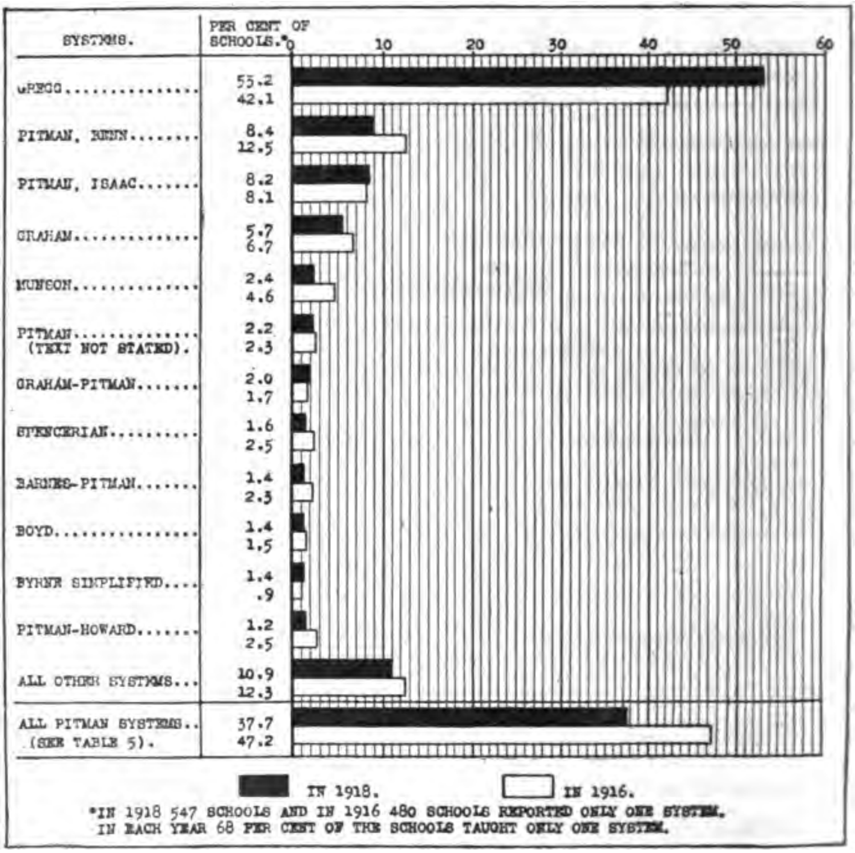


FIG. 22.—Percentage of private commercial schools (teaching only one system) which teach the systems of shorthand most generally offered, 1917–18.

As comparative data in the number of schools offering only one system of shorthand for the consecutive biennial reports, 1916 and 1918, are available, this information has been used in the construction of figures 22, 23, and 24. In figure 22 it will be observed that the Gregg system in 1918 (black bars) was taught in 53.2 per cent of the 547 schools teaching only one system and in 1916 (open bars) in 42.1 per cent of the 480 one-system schools reporting at that time. The Gregg has gained the difference between 53.2 per cent and 42.1 per cent, or 11.1 per cent, in the number of one-system schools. This means an increase of 11.1 per cent on 42.1 per cent, or a gain of 26.4 per cent. This increase is shown by the open bar in figure 24. During this interval a decrease of 20.3 per cent is shown for all Pitman systems. It will be observed in figure 22 that the black bar is longer than the white one in only four instances, viz, Byrne Simplified, Graham-Pitman, Gregg, and Isaac Pitman. The other 8 systems show a decrease in the percentage of schools teaching each exclusively.

It will be observed that the percentage of schools rather than the total number of schools teaching each system exclusively has been used and the percentage of increase or decrease computed therefrom. A different but erroneous result would be obtained by computing the percentage of increase or decrease from the total number of schools reporting, since, in 1916, only 77 per cent of the schools (701 schools out of a total of 912 reporting) indicated the systems of shorthand taught, whereas in 1918, 90 per cent (801 out of 890 reporting) indicated the systems taught. In other words, this year replies were received from 100 more schools than reported the systems of shorthand taught two years ago. It should be noted also that 22 more schools reported in 1916 than did in 1918. Undoubtedly, these 100 schools taught shorthand in 1916 but did not name the systems taught, since the question, "What system of shorthand do you teach?" was asked for the first time two years ago. Presumably, 68 of these 100 schools, in 1916, taught one system only and 32, two or more systems, if the ratio between one-system and more-than-one-system schools holds as indicated in figure 18. It would be erroneous, therefore, to count such schools, not reporting in 1916 but reporting in 1918, as increases in the number of schools teaching the respective systems of shorthand, either for one-system schools or for more-than-one-system schools. The reliability of this percentage method of computing rates of change is based on the assumption that the same relative percentage of schools taught each system in 1916 as in 1918.

INCREASE OR DECREASE SINCE 1916 IN THE TOTAL NUMBER OF SCHOOLS TEACHING EACH OF THE 10 SYSTEMS OF SHORTHAND MOST GENERALLY TAUGHT IN 1918.

In considering the total number of schools teaching each system of shorthand the 10 leading systems, as indicated in Table 5, column 13, have been chosen for comparison. It will be observed that each of these 10 systems is taught in 17 schools or more, or in at least 2 per cent of all schools reporting shorthand courses. The Barnes-Pitman, Boyd, and Byrne Simplified systems do not appear, therefore, in figures 23, 24, and 25, while the Stenotype, which deos not appear in the discussion of one-system schools, has been added. If the three systems dropped from consideration had been included it would have been necessary to add the Eclectic, which is taught in 9 schools.

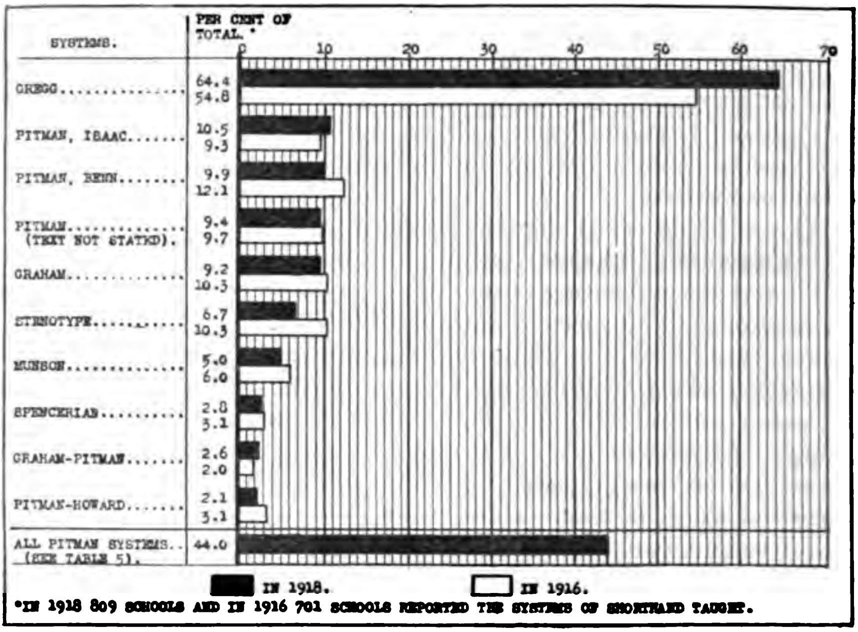


FIG. 23.—Percentage of all private commercial schools which teach the systems most generally given, 1917-18.

In 1918, altogether 809 schools reported the system or systems of shorthand taught. As shown in figure 23, 64.4 per cent of these schools offered the Gregg; 10.5 per cent, the Isaac Pitman, etc. In 1918, 381 different schools, or 44 per cent of the total number reporting, offered a Pitmanic system, but in 1916 this information was not tabulated, so that the percentage of increase or decrease for all Pitman systems since 1916 in all schools can not be ascertained from the data at hand. In 1916, 701 schools named the system or systems taught. Figure 23 shows that 54.8 per cent offered the Gregg; 9.3 per cent the Isaac Pitman, etc. The same condition prevails as was pointed out in the preceding graph, viz, that the Gregg, Graham-Pitman, and the Isaac Pitman in 1918 show an increase over 1916 in the percentage of all schools teaching these systems. The other 7 systems show a decrease. The method used in computing the change in percentage is the same as that used for schools teaching 'y one system of shorthand. For example, the Munson was taught in 1916 in 6 per cent of the schools and in 1918 in only 5 per cent of the schools. The decrease is, therefore, 1 per cent on a base of 6 per cent, or 16.7 per cent as shown in figure 24.

CHANGE SINCE 1916 IN THE PERCENTAGE OF PRIVATE COMMERCIAL SCHOOLS TEACHING EACH OF THE TEN SYSTEMS OF SHORTHAND MOST GENERALLY TAUGHT IN 1918.

As explained above, figure 24 shows whether a system of shorthand has "gained" or "lost" schools within the past two years. The Graham-Pitman system has gained the largest percentage of schools, showing an increase of 30 per cent in the relative percentage of schools teaching this system. This does not mean that this system is being learned by 30 per cent more students than studied it in 1916. It shows only the increase in the percentage of schools teaching this system. The Gregg system shows the greatest gain in the number of schools teaching one system exclusively, while the Graham-Pitman ranks second. The Stenotype shows the greatest loss in the total number of schools teaching this system, and the Pitman-Howard the greatest loss in one-system schools. It must be remembered that the other systems not chosen for study, and, therefore, not included in the graphs, also show increases or decreases. In fact, the systems not taught in 1916 but reporting only a few schools in 1918 would show infinite gains. Likewise discontinued systems show loss of 100 per cent. The percentages of increase or decrease similar to those shown in figure 24 can be readily ascertained for other systems of shorthand from Table 5, columns 3, 5, 14, and 16. The exact method used in computing the length of the bars used in figure 24 is given in Table 6. It should be added that since 1916 the Barnes-Pitman and the Boyd Syllabic have decreased 39 per cent and 7 per cent, respectively, while the Byrne Simplified has increased 56 per cent in the percentage of schools teaching each system. As the number of schools reporting each system is small, these percentages may not be authentic and consequently have not been inserted in figure 24.

OPPORTUNITY OF STUDENTS TO ELECT THE TEN LEADING SYSTEMS OF SHORTHAND.

It is unfortunate that the total number of students taking each system of shorthand offered in all private commercial schools is not known. Fairly accurate deductions have been drawn already from schools teaching only one system. It is of interest to note the opportunity which students have to elect the different systems taught. In other words, how many students are "exposed" to each system? The richness of a curriculum is determined by the opportunity afforded students to choose among a variety of subjects.

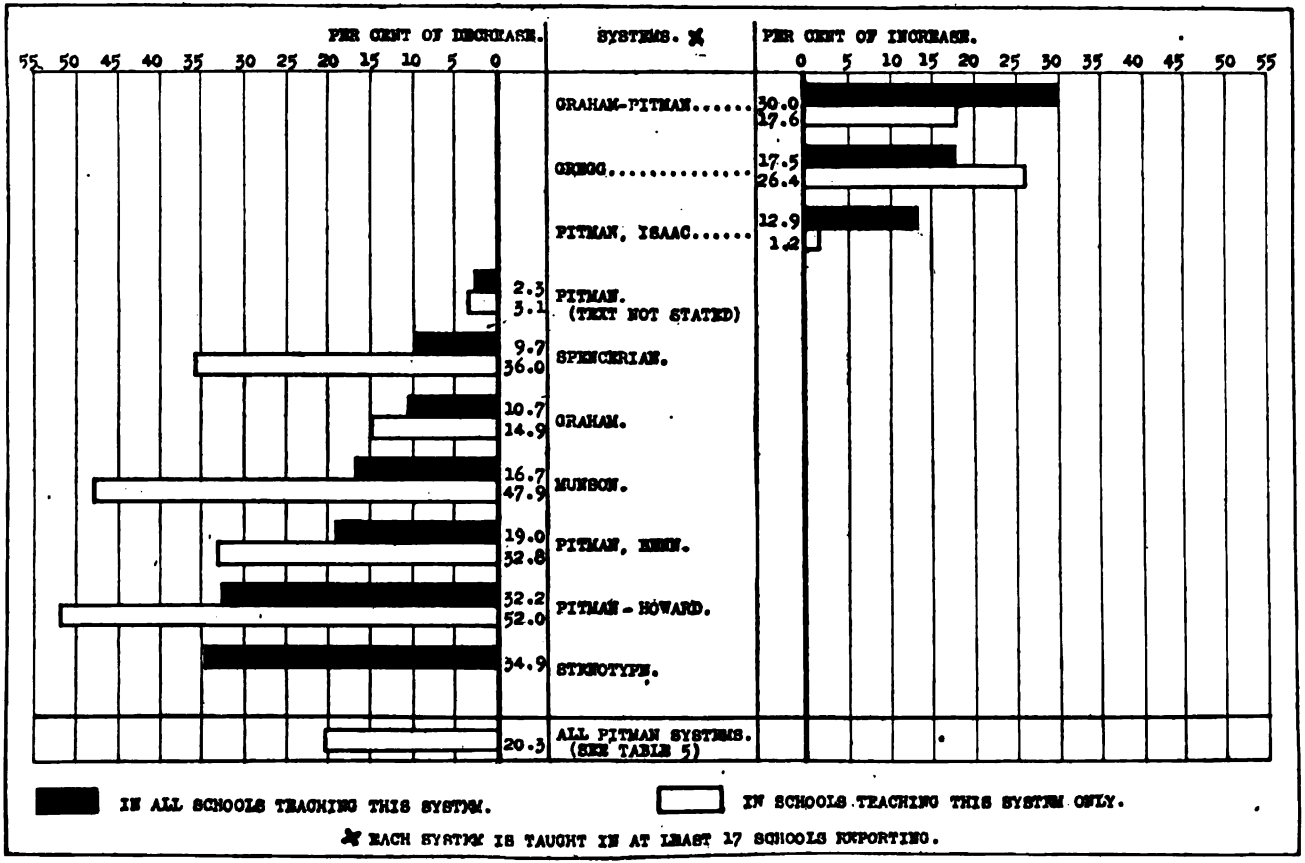


FIG. 24.—Percentage of increase or decrease, since 1916, in the number of private commercial schools teaching the 10 systems of shorthand most generally given, 1917–18.

It is found in Table 5 that the total number of students enrolled in stenographic courses in schools reporting the names of the systems taught was 149,124. Of this number, 106,083 students were enrolled in schools teaching the Gregg only or the Gregg and one or more other systems. This means that 71.14 per cent of all students enrolled in the stenographic courses were "exposed" to the Gregg. This percentage is somewhat higher than that representing the actual percentage of students taking the Gregg in one-system schools; viz, 53.8 per cent. This apparent discrepancy is explained by the fact that the two percentages represent different things—the former "opportunity" to take, the latter, the percentage actually taking. Altogether 87,062 students, or 58.3 per cent of the total number in stenographic courses, were enrolled in schools offering a Pitman system. This percentage also is higher than the 39.72 per cent given for Pitman systems in figure 21, for the reasons just cited. The same variance is shown for other systems as well. The fact that a student may have chosen a school because a certain system of shorthand is taught has not been considered since schools are more generally selected because a certain course of superior quality is offered, because the tuition rates are reasonable, or because a position is guaranteed upon graduation. In figure 25 the relative rank of the 10 leading systems is shown. By comparing the ranking in this graph with that shown in figure 21, it will be observed that the four leading systems—the Gregg, Isaac Pitman, Benn Pitman, and Graham—maintain their relative positions on both scores in the order just named. In general, the same relative ranks are maintained in both figures. It should be noted that the total number of students

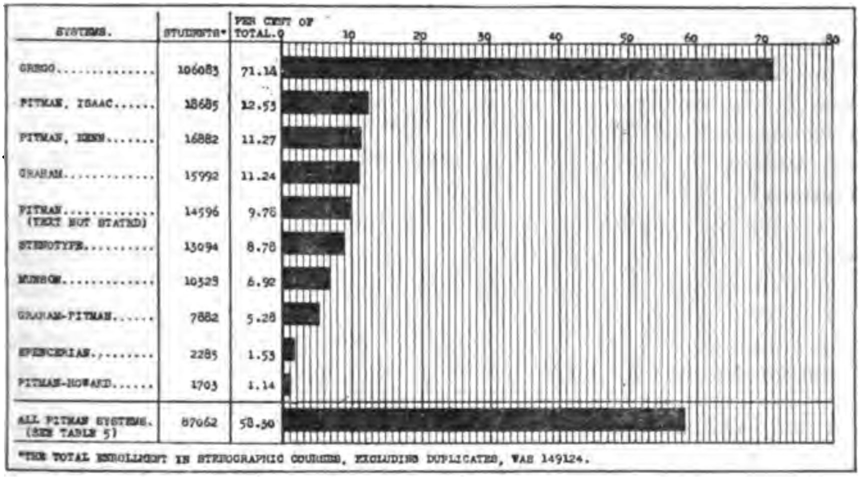


FIG. 25.—Percentage of students enrolled in the stenographic course, having opportunity to take one or more of the 10 systems of shorthand most generally taught in private commercial schools, 1917-18.

"exposed" in the second column of figure 25 exceeds the total enrollment in stenographic courses. Likewise the corresponding percentages exceed 100. This apparent discrepancy is explained by the fact that a large number of students have an opportunity to take more than one system.

COURSES NOT CONSIDERED.

It should be remarked that the foregoing study of shorthand systems does not include the total number of students pursuing the subject of shorthand in private commercial and business schools. The students in the combined and secretarial courses offered by many schools are not included in this study. However, the conclusions reached above undoubtedly will hold for the total number of students in private commercial schools taking shorthand in all courses in which it is a requisite.

It should be remembered also that no attempt has been made to determine whether one system of shorthand is better than another, nor to ascertain the usual time required to complete each. These two factors, however, may function in producing the situation just presented, but no data are available to warrant conclusive deductions relative thereto.

TABLE 7.—*Instructors, students, and attendance in all private commercial and business schools reporting in 1917–18.*

States.	Schools reporting.	Instructors.			Students enrolled.			Average daily attendance.	Enrollment in schools reporting average daily attendance.	Schools not reporting.
		Men.	Women.	Total.	Men.	Women.	Total.			
1	2	3	4	5	6	7	8	9	10	11
United States...	890	2,310	2,930	5,240	96,449	193,130	289,579	122,688	261,836	439
Alabama	11	15	27	42	937	2,635	3,572	932	3,189	7
Arizona	1	2	4	6	91	319	410	126	410	2
Arkansas	7	16	18	34	504	1,310	1,814	854	1,814	2
California	32	102	134	236	5,848	12,675	18,523	10,149	18,344	23
Colorado	14	35	62	97	1,520	3,191	4,711	1,924	4,711	2
Connecticut	26	55	83	138	1,333	3,667	5,000	2,825	4,758	7
Delaware	3	22	15	37	1,073	1,025	2,098	897	2,098	1
Dist. Columbia	6	47	46	93	2,349	3,764	6,113	1,167	4,168	8
Florida	8	10	23	33	565	1,479	2,044	776	1,894	1
Georgia	12	35	25	60	1,159	2,030	3,189	1,513	3,189	10
Idaho	4	4	6	10	89	325	414	200	297	2
Illinois	62	159	223	382	7,241	15,034	22,275	7,486	16,372	29
Indiana	36	58	77	135	2,627	6,360	8,987	3,980	8,835	11
Iowa	21	39	78	117	1,993	5,012	7,005	2,065	5,411	11
Kansas	21	60	72	132	2,315	4,821	7,136	2,833	7,075	6
Kentucky	12	51	35	86	1,539	2,563	4,102	1,565	4,107	10
Louisiana	7	21	26	47	1,383	1,757	3,140	1,923	2,994	9
Maine	11	19	29	48	450	1,118	1,568	604	897	3
Maryland	10	57	17	74	1,421	1,281	2,702	718	2,256	10
Massachusetts	36	125	139	264	4,177	6,394	10,571	5,359	9,956	29
Michigan	33	77	95	172	3,209	6,073	9,282	3,794	8,731	13
Minnesota	33	88	95	183	3,110	5,342	8,452	3,651	8,062	10
Mississippi	2	5	4	9	120	365	485	25	60	3
Missouri	32	73	105	178	4,338	6,660	10,998	4,737	10,785	21
Montana	6	10	12	22	340	1,280	1,620	398	1,620	2
Nebraska	13	27	48	75	1,178	3,519	4,697	1,797	4,091	2
Nevada	1	2	....	2	25	150	175	69	175	....
New Hampshire	4	7	17	24	347	593	940	412	864	2
New Jersey	25	74	95	169	3,674	6,594	10,268	3,815	8,250	15
w Mexico	2	1	5	6	91	266	357	98	357	1

TABLE 7.—*Instructors, students, and attendance in all private commercial and business schools reporting in 1917-18*—Continued.

States	Schools reporting.	Instructors.			Students enrolled.			Average daily attendance.	Enrollment in schools reporting average daily attendance.	Schools not reporting.
		Men.	Women.	Total.	Men.	Women.	Total.			
1	2	3	4	5	6	7	8	9	10	11
New York	95	311	423	734	13,778	26,215	39,993	17,042	36,886	51
North Carolina	9	17	17	34	530	1,191	1,721	654	1,299	5
North Dakota	5	9	6	15	415	502	917	428	917	1
Ohio	62	144	163	307	5,185	12,299	17,484	8,127	15,787	29
Oklahoma	10	16	26	42	1,210	1,698	2,908	905	2,558	4
Oregon	7	18	21	39	1,234	1,902	3,136	1,168	3,166	1
Pennsylvania	82	220	272	492	7,406	15,899	23,305	12,484	21,131	32
Rhode Island	8	43	52	95	1,120	2,167	3,287	1,530	2,906	3
South Carolina	4	4	8	12	125	433	558	225	558	4
South Dakota	5	6	14	20	240	620	860	440	860	2
Tennessee	9	24	29	53	835	2,271	3,106	1,091	2,304	8
Texas	32	81	93	174	4,291	6,676	10,967	4,672	10,524	15
Utah	4	12	15	27	569	1,422	1,991	656	1,991	2
Vermont	3	3	8	11	168	389	557	236	557	1
Virginia	11	22	36	58	738	1,885	2,623	1,208	2,623	4
Washington	19	33	56	89	1,765	4,946	6,711	2,002	6,209	7
West Virginia	7	10	18	28	528	1,614	2,142	1,102	2,142	4
Wisconsin	25	40	55	95	1,186	3,209	4,395	1,886	3,450	14
Wyoming	2	1	3	4	80	190	270	140	270	......

TABLE 8.—*Instructors, students, and attendance in private nondenominational commercial and business schools reporting in 1917-18.*

States.	Schools reporting.	Instructors.			Students enrolled.			Average daily attendance.	Enrollment in schools reporting average daily attendance.	Schools not reporting.
		Men.	Women.	Total.	Men.	Women.	Total.			
1	2	3	4	5	6	7	8	9	10	11
United States	780	1,819	2,802	4,621	81,744	188,779	270,523	115,696	247,369	422
Alabama	9	12	27	39	852	2,635	3,487	863	3,104	5
Arizona	1	2	4	6	91	319	410	126	410	2
Arkansas	7	16	18	34	504	1,310	1,814	854	1,814	2
California	30	89	134	223	5,099	12,675	17,774	9,994	17,595	22
Colorado	13	30	62	92	1,430	3,191	4,621	1,900	4,621	1
Connecticut	24	47	83	130	1,107	3,637	4,744	2,735	4,502	7
Delaware	2	15	15	30	1,020	1,025	2,045	875	2,045	1
Dist. Columbia	4	32	46	78	1,589	3,746	5,335	1,167	4,168	8
Florida	8	10	23	33	565	1,479	2,044	776	1,894	1
Georgia	11	30	25	55	999	2,030	3,029	1,373	3,029	10
Idaho	4	4	6	10	89	325	414	200	297	2
Illinois	52	124	202	326	5,955	14,804	20,759	7,082	15,475	29
Indiana	32	56	73	129	2,395	6,326	8,721	3,792	8,569	11
Iowa	21	39	78	117	1,993	5,012	7,005	2,065	5,411	11
Kansas	21	60	72	132	2,315	4,821	7,136	2,833	7,075	6
Kentucky	7	12	25	37	719	2,016	2,735	1,223	2,740	10
Louisiana	7	21	26	47	1,383	1,757	3,140	1,923	2,994	3
Maine	11	19	29	48	450	1,118	1,568	604	897	9
Maryland	6	10	14	24	378	1,069	1,447	432	1,001	9
Massachusetts	25	65	127	192	2,916	6,000	8,916	4,430	8,795	28
Michigan	29	53	92	145	2,313	6,028	8,341	3,596	8,499	13
Minnesota	30	78	95	173	2,763	5,342	8,105	3,515	7,715	10
Mississippi	2	5	4	9	120	365	485	25	60	3
Missouri	28	72	101	173	4,123	6,441	10,564	4,717	10,564	21
Montana	6	10	12	22	340	1,280	1,620	398	1,620	2
Nebraska	12	24	48	72	1,078	3,519	4,597	1,755	3,991	2
Nevada	1	2	....	2	25	150	175	69	175	......
New Hampshire	4	7	17	24	347	593	940	412	864	2
New Jersey	20	59	90	149	3,169	6,361	9,530	3,628	7,970	14
New Mexico	2	1	5	6	91	266	357	98	357	1
New York	85	198	404	602	10,675	25,411	36,086	15,250	33,459	48
North Carolina	8	15	17	32	514	1,191	1,705	646	1,283	5
North Dakota	5	9	6	15	415	502	917	428	917	1

TABLE 8.—*Instructors, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

States.	Schools reporting.	Instructors.			Students enrolled.			Average daily attendance.	Enrollment in schools reporting average daily attendance.	Schools not reporting.
		Men.	Women.	Total.	Men.	Women.	Total.			
1	2	3	4	5	6	7	8	9	10	11
Ohio	46	101	142	243	4,271	11,922	16,193	7,292	14,730	24
Oklahoma	10	16	26	42	1,210	1,698	2,908	905	2,558	4
Oregon	5	10	20	30	579	1,902	2,481	997	2,511	1
Pennsylvania	72	212	258	470	7,229	15,620	22,849	12,095	20,686	30
Rhode Island	7	36	52	88	1,030	2,167	3,197	1,530	2,906	3
South Carolina	4	4	8	12	125	433	558	225	558	4
South Dakota	5	6	14	20	240	620	860	440	860	2
Tennessee	9	24	29	53	835	2,271	3,106	1,091	2,304	8
Texas	29	74	93	167	4,185	6,676	10,861	4,613	10,418	15
Utah	3	4	7	11	215	507	722	192	722	2
Vermont	3	3	8	11	168	389	557	236	557	1
Virginia	9	20	34	54	717	1,871	2,588	1,175	2,588	4
Washington	17	32	55	87	1,324	4,946	6,270	1,993	6,199	7
West Virginia	7	10	18	28	528	1,614	2,142	1,102	2,142	4
Wisconsin	25	40	55	95	1,186	3,209	4,395	1,886	3.450	14
Wyoming	2	1	3	4	80	190	270	140	270	......

TABLE 9.—*Instructors, students, and attendance in Y. M. C. A. and denominational commercial schools in 1917–18.*

States.	Schools reporting.	Instructors.			Students enrolled.			Average daily attendance.	Enrollment in schools reporting average daily attendance.	Schools not reporting.
		Men.	Women.	Total.	Men.	Women.	Total.			
1	2	3	4	5	6	7	8	9	10	11
United States	110	491	128	619	14,705	4,351	19,056	6,992	14,467	17
Alabama	2	3	....	3	85	....	85	69	85	2
California	2	13	....	13	749	....	749	155	749	1
Colorado	1	5	....	5	90	....	90	24	90	1
Connecticut	2	8	....	8	226	30	256	90	256	......
Delaware	1	7	....	7	53	....	53	22	53	......
Dist. Columbia	2	15	....	15	760	18	778	....	....	......
Georgia	1	5	....	5	160	....	160	140	160	......
Illinois	10	35	21	56	1,286	230	1,516	404	897	......
Indiana	4	2	4	6	232	34	266	188	266	......
Kentucky	5	39	10	49	820	547	1,367	342	1,367	......
Maryland	4	47	3	50	1,043	212	1,255	286	1,255	1
Massachusetts	11	60	12	72	1,261	394	1,655	929	1,161	1
Michigan	4	24	3	27	896	45	941	198	232	......
Minnesota	3	10	....	10	347	....	347	136	347	......
Missouri	4	1	4	5	215	219	434	20	221	......
Nebraska	1	3	....	3	100	....	100	42	100	......
New Jersey	5	15	5	20	505	233	738	187	208	1
New York	10	113	19	132	3,103	804	3,907	1,792	3,427	3
North Carolina	1	2	....	2	16	....	16	8	16	......
Ohio	16	43	21	64	914	377	1,291	835	1,057	5
Oregon	2	8	1	9	655	....	655	171	655	......
Pennsylvania	10	8	14	22	177	279	456	389	445	2
Rhode Island	1	7	....	7	90	....	90	....	....	......
Texas	3	7	....	7	106	....	106	59	106	......
Utah	1	8	8	16	354	915	1,269	464	1,269	......
Virginia	2	2	2	4	21	14	35	33	35	......
Washington	2	1	1	2	441	....	441	9	10	......

TABLE 10.—*Students in day and night courses and average daily attendance in all private commercial and business schools reporting in 1917–18.*

States.	Day courses.				Night courses.				Average daily attendance.			
	Schools reporting.	Students.			Schools reporting.	Students.			Schools reporting.	In day schools.	Schools reporting.	In night schools.
		Men.	Women.	Total.		Men.	Women.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13
United States...	841	50,329	132,285	182,614	716	46,120	60,845	106,965	699	79,675	602	43,013
Alabama	10	658	2,383	3,041	8	279	252	531	7	768	6	164
Arizona	1	50	269	319	1	41	50	91	1	89	1	37
Arkansas	7	417	1,173	1,590	5	87	137	224	7	755	5	99
California	30	3,170	8,406	11,576	30	2,678	4,269	6,947	27	6,109	27	4,040
Colorado	14	925	2,279	3,204	13	595	912	1,507	13	1,416	12	508
Connecticut	24	380	1,737	2,117	25	953	1,930	2,883	23	1,282	22	1,543
Delaware	2	311	653	964	3	762	372	1,134	2	400	2	497
District of Columbia	5	447	1,268	1,715	6	1,902	2,496	4,398	3	460	3	707
Florida	8	384	1,253	1,637	8	181	226	407	7	586	7	190
Georgia	12	1,071	1,905	2,976	4	88	125	213	11	1,452	4	61
Idaho	4	63	254	317	3	26	71	97	3	165	2	35
Illinois	58	3,552	9,469	13,021	52	3,689	5,565	9,254	44	4,731	43	2,755
Indiana	34	1,642	4,450	6,092	32	985	1,910	2,895	31	2,700	29	1,280
Iowa	21	1,577	4,192	5,769	15	416	820	1,236	16	1,679	13	386
Kansas	21	1,915	3,982	5,897	14	400	839	1,239	20	2,427	14	406
Kentucky	12	415	1,606	2,021	8	1,124	957	2,081	7	1,028	6	537
Louisiana	7	632	1,346	1,978	7	751	411	1,162	6	1,071	6	852
Maine	11	322	936	1,258	8	128	182	310	9	477	5	127
Maryland	8	256	789	1,045	8	1,165	492	1,657	2	366	3	352
Massachusetts	32	1,553	3,647	5,200	29	2,624	2,747	5,371	24	2,820	23	2,539
Michigan	32	1,782	4,387	6,169	24	1,427	1,686	3,113	29	2,810	22	984
Minnesota	31	1,987	3,857	5,844	26	1,123	1,485	2,608	26	2,653	20	998
Mississippi	2	105	355	460	1	15	10	25	1	25	....	....
Missouri	30	3,066	5,114	8,180	27	1,272	1,546	2,818	27	3,609	24	1,128
Montana	6	201	974	1,175	6	139	306	445	6	282	6	116
Nebraska	12	861	2,949	3,810	8	317	570	887	10	1,543	5	254
Nevada	1	10	125	135	1	15	25	40	1	54	1	15
New Hampshire	4	145	328	473	3	202	265	467	3	197	3	215
New Jersey	24	1,252	3,496	4,748	23	2,422	3,098	5,520	18	1,978	18	1,837
New Mexico	2	64	220	284	2	27	46	73	2	80	2	18
New York	90	4,806	15,708	20,514	85	8,972	10,507	19,479	78	8,685	74	8,157
North Carolina	8	430	1,086	1,516	5	100	105	205	7	547	4	107
North Dakota	5	408	481	889	2	7	21	28	5	415	2	13
Ohio	57	2,536	8,501	11,037	49	2,649	3,798	6,447	41	5,288	37	2,839
Oklahoma	10	934	1,361	2,295	8	276	337	613	9	717	7	188
Oregon	7	740	1,507	2,247	6	494	395	889	4	894	4	274
Pennsylvania	75	3,263	9,223	12,486	69	4,143	6,676	10,819	61	7,048	61	5,436
Rhode Island	8	465	1,061	1,526	6	655	1,106	1,761	6	678	5	852
South Carolina	4	111	418	529	2	14	15	29	4	197	2	28
South Dakota	5	177	510	687	3	63	110	173	5	348	3	92
Tennessee	9	721	2,106	2,827	2	114	165	279	7	1,091	....	....
Texas	30	3,569	5,909	9,478	24	722	767	1,489	26	3,991	20	681
Utah	3	205	905	1,110	4	364	517	881	2	421	3	235
Vermont	3	87	232	319	3	81	157	238	3	153	3	83
Virginia	11	585	1,670	2,255	4	153	215	368	9	1,061	4	147
Washington	17	847	3,743	4,590	18	918	1,203	2,121	15	1,477	15	525
West Virginia	7	287	1,225	1,512	7	241	389	630	7	749	7	353
Wisconsin	25	900	2,692	3,592	17	286	517	803	22	1,603	15	283
Wyoming	2	45	145	190	2	35	45	80	2	100	2	40

TABLE 11.—*Enrollment by course of study in all private commercial and business schools reporting in 1917–18.*

States.	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire) course.		Telegraphy (wireless) course.		Accountancy course.		Secretarial course.		Salesmanship course.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
United States	36,451	33,069	30,809	121,593	15,628	32,853	2,495	2,420	2,696	314	5,186	1,180	2,985	10,852	2,194	1,798
Alabama	534	281	367	1,951	57	86	...	...	...	...	...	...	...	...	...	...
Arizona	37	33	44	229	10	57	...	...	...	...	...	...	...	...	...	...
Arkansas	268	279	182	886	90	183	...	...	...	...	...	...	...	...	...	...
California	2,457	3,822	1,813	6,635	751	1,962	475	640	530	175	179	26	409	2,133	39	13
Colorado	489	572	334	1,608	402	993	30	56	...	...	31	0	20	80	18	0
Connecticut	601	703	418	2,440	60	591	6	28	20	3	62	4	26	221	12	30
Delaware	501	141	492	718	...	...	...	...	...	...	17	0	27	166	...	...
District of Columbia	135	50	1,327	2,659	12	44	...	...	...	...	430	18	...	...	...	...
Florida	223	148	143	877	142	375	...	...	...	...	...	...	16	71	...	...
Georgia	274	242	97	527	243	421	74	33	...	...	...	...	0	18	...	...
Idaho	48	131	32	250	29	74	2	5	...	...	25	8	...	...	...	...
Illinois	2,690	1,992	2,644	11,396	1,382	1,479	8	7	68	0	456	129	174	467	181	306
Indiana	990	836	617	4,052	486	1,293	330	100	230	10	110	10	56	164	65	85
Iowa	1,135	919	477	3,553	312	775	...	...	...	...	30	8	77	217	26	81
Kansas	1,024	701	753	2,557	955	1,770	76	83	135	13	75	17	19	33	26	2
Kentucky	360	317	306	1,489	207	648	121	99	64	18	70	66	64	88	36	0
Louisiana	581	186	454	1,390	40	72	1	3	...	...	...	...	...	...	...	...
Maine	382	208	87	773	111	440	33	30	...	...	94	0	0	175	61	85
Maryland	273	91	239	989	74	329	...	3	186	1	110	0	7	21	13	0
Massachusetts	1,015	1,455	786	2,970	205	893	82	204	...	...	582	0	157	640	38	0
Michigan	1,360	1,383	776	3,294	406	1,398	71	20	291	0	371	24	14	75	76	60
Minnesota	1,865	1,580	587	3,036	250	953	189	438	51	6	74	53	10	82	86	37
Mississippi	71	52	50	275	17	45	...	...	...	...	...	...	...	...	...	...
Missouri	932	953	990	4,396	1,073	2,026	582	302	...	...	330	133	171	577	22	0
Montana	246	227	108	1,024	14	112	5	48	...	...	...	...	0	12	...	...
Nebraska	328	353	469	2,111	244	768	87	17	...	...	...	...	12	25	83	0
Nevada	5	26	20	109	3	21	...	...	...	...	...	...	...	...	...	...
New Hampshire	197	95	61	340	70	102	17	13	...	...	...	...	0	4	...	...
New Jersey	852	695	1,205	4,418	949	1,209	...	...	...	...	209	0	122	308	35	0
New Mexico	53	47	24	142	80	188	...	...	...	...	1	0	...	...	...	...

New York	4,484	3,636	5,353	16,229	2,254	4,166	62	20	617	88	1,239	236	954	2,992	396	186
North Carolina	245	218	135	541	110	295	4	5							5	8
North Dakota	266	61	51	270	103	209										
Ohio	2,412	2,410	1,738	7,573	1,067	2,583	13	4	38	0	270	228	127	531	36	2
Oklahoma	453	388	466	1,194	237	426							55	108		
Oregon	387	439	270	906	205	351			236	0	59	0				
Pennsylvania	3,328	2,562	3,132	10,498	892	1,689	48	45	10	0	65	84	276	804	51	48
Rhode Island	476	327	371	1,424	92	2					23	6	51	243		
South Carolina	61	25	26	271	27	52							6	89		
South Dakota	157	95	48	429	23	93	11	4			4	0	15	71		
Tennessee	424	485	245	1,601	138	292										
Texas	1,408	1,118	1,457	3,881	1,265	1,607	124	104			55	28	51	46	743	614
Utah	243	199	254	1,103	21	89	5	16								
Vermont	57	41	50	229	49	101							1	2		
Virginia	369	123	242	1,514	110	208					12	0	39	119		
Washington	626	1,085	506	3,111	138	499	18	58	220	0	139	70	7	40	143	160
West Virginia	264	350	201	1,241	43	190					4	2	0	20	6	10
Wisconsin	840	952	267	2,355	217	677	21	35			60	30	22	210	47	71
Wyoming	25	37	35	123	13	17										

TABLE 12.—*Enrollment, by course of study, in private nondenominational commercial and business schools reporting in 1917–18.*

States.	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9
United States	33,988	32,761	28,323	120,514	18,413	30,673	2,249	2,205
Alabama	493	281	322	1,951	49	86	....	....
Arizona	37	33	44	229	10	57	....	....
Arkansas	268	279	182	886	90	183	....	....
California	2,280	3,822	1,666	6,635	687	1,962	475	640
Colorado	463	572	300	1,608	312	993	30	56
Connecticut	601	685	418	2,423	60	591	....	....
Delaware	501	141	492	718	....	....	....	....
District of Columbia	105	50	1,027	2,659	12	44	....	....
Florida	223	148	143	877	142	375	....	....
Georgia	259	242	82	527	228	421	74	33
Idaho	48	131	32	250	29	74	2	5
Illinois	2,559	1,992	2,579	11,396	760	1,249	8	7
Indiana	940	836	606	4,052	468	1,259	300	100
Iowa	1,135	919	477	3,553	312	775	....	....
Kansas	1,024	701	753	2,557	955	1,770	76	83
Kentucky	301	276	228	1,390	161	539	....	....
Louisiana	581	186	454	1,399	40	72	1	3
Maine	382	208	87	773	111	440	33	30
Maryland	136	59	172	989	60	300	....	....
Massachusetts	814	1,455	580	2,954	108	521	82	204
Michigan	1,172	1,372	763	3,271	401	1,387	71	20
Minnesota	1,755	1,580	534	3,036	250	953	154	427
Mississippi	71	52	50	275	17	45	....	....
Missouri	914	953	979	4,396	1,064	1,638	582	302
Montana	246	227	108	1,024	14	112	5	48
Nebraska	295	353	399	2,111	244	768	61	17
Nevada	5	26	20	109	3	21	....	....
New Hampshire	197	95	61	340	70	102	17	13
New Jersey	844	695	1,237	4,307	949	1,176	....	....
New Mexico	53	47	24	142	30	188	....	....
New York	3,847	3,636	4,584	16,129	1,505	3,805	62	20
North Carolina	235	218	129	541	110	295	4	5
North Dakota	266	61	51	270	103	209	....	....
Ohio	2,135	2,409	1,541	7,561	941	2,244	8	4
Oklahoma	453	388	466	1,194	237	426	....	....
Oregon	301	439	114	906	128	351	....	....
Pennsylvania	3,309	2,530	3,087	10,441	777	1,507	48	45
Rhode Island	476	327	371	1,424	2	2	....	....
South Carolina	61	25	26	271	27	52	....	....
South Dakota	157	95	48	429	23	93	11	4
Tennessee	424	485	245	1,601	138	292	....	....
Texas	1,404	1,118	1,457	3,881	1,253	1,607	124	104
Utah	117	26	84	465	3	13	....	....
Vermont	57	41	50	229	49	101	....	....
Virginia	369	123	242	1,514	89	194	....	....
Washington	546	1,085	506	3,111	119	497	....	....
West Virginia	264	350	201	1,241	43	190	....	....
Wisconsin	840	952	267	2,355	217	677	21	35
Wyoming	25	37	35	123	13	17	....	....

TABLE 13.—*Enrollment, by course of study, in Y. M. C. A. and denominational commercial schools reporting in 1917–18.*

States.	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9
United States	2,463	308	2,486	1,079	2,215	2,180	246	215
Alabama	41		45		8			
California	177		147		64			
Colorado	26		34		90			
Connecticut		18		17			6	28
District of Columbia	30		300					
Georgia	15		15		15			
Illinois	131		65		622	230		
Indiana	50		11		18	34	30	
Kentucky	59	41	78	99	46	109	121	99
Maryland	137	32	67		14	29		3
Massachusetts	201		206	22	97	372		
Michigan	188	11	13	23	5	11		
Minnesota	110		53				35	11
Missouri	18		11		9	388		
Nebraska	33		70				26	
New Jersey	8		28	111		33		
New York	637		769	100	749	361		
North Carolina	10		6					
Ohio	277	1	197	12	126	339	5	
Oregon	86		156		77			
Pennsylvania	19	32	45	57	115	182		
Rhode Island					90			
Texas	4				12			
Utah	126	173	170	638	18	76	5	16
Virginia					21	14		
Washington	80				19	2	18	58

TABLE 14.—*Students, tuition fees, and time required to complete the course in wireless telegraphy in commercial and business schools in 1917–18.*

Location.	Name.	Students		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
CALIFORNIA.							
Berkeley	Berkeley Business College	3	6	$10	$50	$10	6
Los Angeles (715 S. Hope St.)	Y. M. C. A. School of Commerce and Finance.	227	94	15	85	10	6
San Francisco (Van Ness Ave. and Post St.)	Heald's Business College	300	75	15	[1] 90	6	8–12
CONNECTICUT.							
Bridgeport	Y. M. C. A. (commercial department).	15				5	
New Haven	Royal Business College	5	3			6	5
ILLINOIS.							
Chicago (19 S. La Salle St.)	Central Y. M. C. A. Institute (commercial department).	68				10	2½
INDIANA.							
Indianapolis	Y. M. C. A. Night School	40				([2])	5
Valparaiso	Dodge's Telegraph, Railway Accounting and Radio (Wireless) Institute.	190	10		65		6

[1] Tuition fee for 8 months.

[2] War service.

TABLE 14.—*Students, tuition fees, and time required to complete the course in wireless telegraphy in commercial and business schools in 1917-18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
KANSAS.							
Hutchinson	Salt City Business College	100	3	$15	$55	......	5-6
Salina	Kansas University of Commerce	35	10	15	75	......	3-6
KENTUCKY.							
Louisville	Y. M. C. A. Schools (commercial department).	64	18	12	48	$4	8
MARYLAND.							
Baltimore (Franklin and Cathedral Sts.).	Association Institute (commercial department).	161	......	12	......	8	4-6
Do	Radio School of Y. M. C. A	25	1	12	70	8	6
MICHIGAN.							
Detroit (Grand Circus Park)	Detroit Institute of Technology.	291	......	......	25	......	3
MINNESOTA.							
Duluth	Y. M. C. A. (commercial department).	25	3	......	......	4	......
St. Paul	Y. M. C. A. Night School (commercial department).	26	3	......	......	3	7
NEW YORK.							
Brooklyn (65 Flatbush Ave.)	Browne's Business College	49	......	......	......	5	6
New York (1931 Broadway).	The Paine Upton Business School.	50	20	10	......	5	4-6
New York (153 E. 86th St.).	East Side Y. M. C. A. (commercial department).	518	68	15	50	15	4½
OHIO.							
Canton	Canton Technical Institute, Y. M. C. A.[1]	12	......	......	20	......	4
Dayton	Y. M. C. A. Institute (commercial department).	26	......	......	......	......	......
OREGON.							
Portland	Y. M. C. A. Schools (commercial department).	236	......	15	50	10	4
PENNSYLVANIA.							
Wilmerding	Y. M. C. A. Evening School (commercial department).	10	......	......	12	......	3
WASHINGTON.							
Seattle	Y. M. C. A. School (commercial department).	220	......	15	60	8	4-5

[1] Night school.

TABLE 15.—*Students, tuition fees, and time required to complete the course in accountancy in commercial and business schools in 1917–18.*

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
CALIFORNIA.							
Los Angeles (cor. 2d and Spring Sts.).	School of Commerce, Accounts, and Finance, Southwestern University.	64	14	......	[1] $80	......	19
Los Angeles (715 S. Hope St.).	Y. M. C. A. School of Commerce and Finance.	66	......	......	......	[2] $14	20
Oakland	Heald's Business College	2	......	$15	......	......	4–6
San Diego	San Diego Business and Academic College.	15	4	15	140	......	12–24
San Francisco (220 Golden Gate Ave.).	Y. M. C. A. (commercial department).	28	......	......	......	8	24
Santa Ana	Orange County Business College	4	8	15	[3] 125	7	12
COLORADO.							
Denver	Y. M. C. A. Business School	31	......	......	......	[4] 15	25½
CONNECTICUT.							
Bridgeport	Y. M. C. A. (commercial department).	45	2	......	......	[2] 50	......
Hartford	Huntsinger Business School	12	2	......	......	5	24
Do.	Merchants' and Bankers' Business College.	4	......	15	......	......	8–10
South Norwalk	Merrill Business College	1	......	14	......	......	......
DELAWARE.							
Wilmington	Y. M. C. A. Evening School (commercial department).	17	......	......	30	......	......
DISTRICT OF COLUMBIA.							
Washington (1736 G St. NW.).	Washington School of Accountancy, Y. M. C. A.	430	18	9	[3] 36	9	24
IDAHO.							
Moscow	Creekmur's Business College	25	8	10	......	5	
ILLINOIS.							
Alton	Brown Business College	3	......	12	35	......	[5] 3
Chicago (19 S. La Salle St.).	Central Dept. Y. M. C. A. Institute (commercial department).	125	......	......	......	8	24
Chicago (4732 Irving Park Blvd.).	Columbia Business College	2	1	12	......	6	12
Chicago (1134–40 Wilson Ave.).	Pierson Business College	34	41	12	......	......	......
Chicago (122 S. Michigan Blvd.).	Walton School of Commerce [6]	255	66	......	200	......	27
Chicago (638–40 W. Garfield Blvd.).	Watson's Business College	9	10	12	......	6	......
Danville	Brown's Business College	10	5	13	95	5	9
East St. Louis	Summers College of Commerce	2	......	10	60	......	6
Rock Island	Brown's Business College	10	......	15	100	6	9
Waukegan	Waukegan Business College	6	6	10	[3] 95	5	8–12
INDIANA.							
Aurora	Richmond's Aurora Business College.	6	......	10	25	......	2–5
Fort Wayne	International Business College	50	10	15	125	......	8
Indianapolis	Y. M. C. A. Night School (commercial department).	54	......	......	105	......	12
IOWA.							
Mason City	Hamilton's University of Commerce.	8	1	13	100	......	18
Muscatine	Brown's Business College	1	......	15	100	......	9
Ottumwa	Ottumwa Commercial College	21	7	10	60	5	6

[1] Tuition for 1 year in night school.
[2] Tuition for 17 weeks.
[3] Tuition for 1 year.
[4] Tuition for 30 weeks.
[5] After complete bookkeeping course.
[6] Night school.

TABLE 15.—*Students, tuition fees, and time required to complete the course in accountancy in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
KANSAS.							
Abilene	Central Kansas Business College	2	1	$10	$50		6
Manhattan	Manhattan Business College	1	2	9	40		6
Newton	Newton Business College	2		10		$5	3
Topeka	Topeka Business College	55	13	15		4	5
Wichita	Wichita Business College	15	1	14		6	12
KENTUCKY.							
Covington	Curtis Commercial College	50	64		50		6
Louisville	Y. M. C. A. Schools (commercial department).	20	2			5	16
MAINE.							
Portland	Shaw Business College[1]	94		13		6	6
MARYLAND.							
Baltimore (Franklin and Cathedral Sts.).	Association Institute (commercial department).	110				9	32
MASSACHUSETTS.							
Boston (161 Massachusetts Ave.).	Chandler School for Women	7		20			10
Boston (316 Huntington Ave.).	Northeastern College, School of Commerce and Finance.[2]	477			([3])		48
Springfield	Y. M. C. A. (commercial department).[2]	27			120		12
Worcester	Northeastern College, School of Commerce and Finance.	71			([4])		36
MICHIGAN.							
Big Rapids	Ferris Institute (commercial department).	15		10	75		9-24
Detroit (Grand Circus Park).	Detroit Institute of Technology	272			52	11	30
Grand Rapids	War Industrial Training Institute Y. M. C. A.	50				13	3
Iron Mountain	Actual Business College	25	12	12	65	5	
Ironwood	Ironwood Business College	6	2	10	85	5	10
Muskegon	Muskegon Commercial College	3	10	12	65		9-12
MINNESOTA.							
Albert Lea	Albert Lea Commercial College	2		20	200	8	27
Austin	University of Southern Minnesota (commercial department).	4	6	10	80		15
Minneapolis (Nicollet at 10th St.).	Collegiate Business Institute	39	4		175	[5] 18	9
St. Paul	Lancaster Business Institute	5		12		5	
Winona	Winona Business College	24	43	12	70	5	5-6
MISSOURI.							
Chillicothe	Chillicothe Business College	50	19	15	75		6
Kansas City	Kansas City Business College	38	99	12	80	6	6 9
Do	Kansas City School of Accountancy, Law, and Finance.[1]	150	15	10	210		30
St. Louis (Grand and Franklin).	Ralph Sellew Institute, Y. M. C. A.[2]	92			60		8¼
NEW JERSEY.							
Bayonne	Drake Business College	10				12	
Newark (111 Halsey St.)	Y. M. C. A. (commercial department).	199				12	30
NEW MEXICO.							
Roswell	Standard Business School	1		7			

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[1] Includes one branch school.

[2] Night school.

[3] Tuition fees, $75 to $85 for course.

[4] Tuition fees, $65 to $80 for course.

[5] Tuition fee for subject.

TABLE 15.—*Students, tuition fees, and time required to complete the course in accountancy in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
NEW YORK.							
Amsterdam	Reynolds Business School	21	7	$9		$4	6–9
Brooklyn (1121 Bedford Ave.).	Bedford Branch, Y. M. C. A. (commercial department).	26				12	7½
Brooklyn (55 Hanson Place).	Marquand School	302			[1] $256		
Brooklyn (Orange and Hicks Sts.).	Plymouth Institute of Accountancy.	42	5			16	20
Buffalo (Mohawk and Franklin Sts.).	Association Institute, Y. M. C. A.	120				12	22
New York (215 West 23d St.).	Chelsea School	336				14	24
New York (36 West 123d St.).	Eastman-Gaines School	10		15		5	24
New York (280 Madison Ave.).	Institute of Commerce	5	7	15	120	6	2–4
New York (Broadway at 66th St.).	Mull's School	2				6	
New York (1135 Broadway).	New York School of Accounts	8			95		
New York (Lexington Ave. and 35th St.).	Packard Commercial School	25	3			10	
New York (32 Broadway).	Post Graduate School of Accountancy.[2]	45	2	31	125		4
New York (318 West 57th St.).	West Side Y. M. C. A. (commercial department).	12			[1] 17		8
Peekskill	Peekskill Business College	18	16	12	80	6	10
Rochester	Williams and Rogers Rochester Business Institute.	36	6			9	
Troy	Troy Business College	215	175	13	75	4	
Utica	Excelsior School of Business	16	15	10		8	
OHIO.							
Akron	Hammel Business College	2		10	55	6	6
Ashtabula	Ashtabula Business College	3	2	13	125	5	12–15
Canton	Canton Technical Institute, Y. M. C. A.[3]	27			40		
Cleveland (Ontario St.)	Cleveland Business University	130	207	10		5	7
Columbus (131 E. State St.).	Bliss Business College	15	6			10	30
Dayton	Miami-Jacobs Business College	7	3			7	10
Do	Y. M. C. A. Institute (commercial department).[3]	30	3		200		21
Greenville	Commercial-Normal College	3	1	12	84	5	7
Lancaster	Columbia Commercial University	4	0	12	132		11
Steubenville	Steubenville Business College	5	5	10	99		7–11
Toledo	Y. M. C. A. School (commercial department).[3]	20	1			10	20
Youngstown	do.[3]	24		[3] 214			21
OREGON.							
Portland	Christian Brothers Business College.	25		(4)			12
Do	Y. M. C. A. (commercial department).	34			[5] 75		24
PENNSYLVANIA.							
Allentown	American Commercial School	3		12		5	
Beaver Falls	Duffs College	9	2	12	110		9
Easton	Churchman Business College	14	7	12	100	5	14
Harrisburg	Harrisburg Shorthand School	8	12	10	60		6
Indiana	Leech's Actual Business College	2	1	12	120	6	10
Philadelphia (723 Chestnut St.).	American Business College	21	55	10	100	5	10–12
Warren	Hoff Business College	3		10			8
Wilmerding	Y. M. C. A. Evening School (commercial department).	5	7			3	

[1] Tuition fee, night school.

[2] Night school.

[3] Tuition for five semesters.

[4] Tuition fee, $5 to $8 per month.

[5] Tuition for 1 year in night school.

TABLE 15.—*Students, tuition fees, and time required to complete the course in accountancy in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
RHODE ISLAND.							
Providence	Bryant and Stratton Commercial School.	23	6	......	......	$8	17-20
SOUTH DAKOTA							
Watertown	South Dakota School of Business.	4	......	$12	$200	5	24
TEXAS.							
Tyler	Tyler Commercial College	55	48	20	......	......	2
VIRGINIA.							
Newport News	International Business College	6	......	12	75	......	10
Staunton	Dunsmore Business College	6	......	12	75	......	9
WASHINGTON.							
Aberdeen	Grays Harbor Business College	2	2	15	75	......	6
Seattle	Western Institute of Accountancy, Commerce, and Finance.	100	40	......	......	8	36
Spokane	Western Institute of Accountancy.[1]	37	28	10	65	......	18
WEST VIRGINIA.							
Charleston	Capital City Commercial College	4	2	12	65	......	6
WISCONSIN.							
Appleton	Actual Business College	13	14	15	160	......	6
Do	Appleton Business College	20	10	12	......	......	......
Green Bay	Badger Commercial College and Telegraph School.	7	6	15	50	5	4
Milwaukee	Wisconsin School of Accountancy and Stenography.	20	......	13	......	......	......

[1] Night school.

TABLE 16.—*Students, tuition fees, and time required for completing secretarial course in commercial and business schools in 1917–18.*

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month	
1	2	3	4	5	6	7	8
CALIFORNIA.							
Oakland	Heald's Business College	1	20	$15	......	......	8-12
San Francisco (Van Ness Ave. and Post St.).	do	275	375	15	[1] $90	$6	8-12
San Francisco (600 Sutter St.).	Munson School for Private Secretaries.	130	1,728	16	122	6	8
San Jose	Heald's Business College	2	3	15	......	......	......
Santa Ana	Orange County Business College	1	7	15	[2] 125	7	12
COLORADO.							
Denver	Central Business College	20	80	12	......	5	9

[1] Special rate of tuition for 8 months.

[2] Tuition fee for 1 year.

TABLE 16.—*Students, tuition fees, and time required for completing secretarial course in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
CONNECTICUT.							
Hartford	Huntsinger Business School	......	70	$15	$150	......	10
Do	Merchants' and Bankers' Business College.	3	3	15	......	$5	......
Do	Modern Business School	2	10	15	......	5	......
Do	Morse Business College	4	9	16	......	5	20
New Haven	Stebbing Commercial School	5	102	15	......	......	12–18
Do	Stone Business College	12	27	15	......	6	10–12
DELAWARE.							
Wilmington	Beacom Business Colleges	17	96	16	......	......	12
Do	Goldey College	10	70	16	......	6	10–12
FLORIDA.							
Miami	Pan American College of Commerce.	16	71	15	140	8	12–15
GEORGIA.							
Atlanta	Atlanta Business College	......	18	15	60	......	6
ILLINOIS.							
Alton	Brown's Business College	......	52	12	90	[1] 8	9
Chicago (4732 Irving Park Blvd.).	Columbia Business College	2	17	12	......	6	12
Chicago (1206 East 63d St.).	MacCormac School	3	11	12	......	......	9–12
Chicago (616 S. Michigan Ave.).	National Institute of Secretaries	21	69	......	50	......	5–7
Chicago (638–40 W. Garfield Blvd.).	Watson's Business College	12	28	12	......	6	......
Chicago Heights (92 Illinois St.).	Chicago Heights Business College	......	4	10	......	......	12
East St. Louis (301 Collinsville Ave.).	Brown's Business College	89	135	10	90	5	9
East St. Louis (Main and Broadway).	Summers College of Commerce	10	......	10	60	......	6
Flora	The Orchard City College	......	8	12	......	......	7
Moline	Brown's Business College	1	24	15	110	......	9
Rock Island	do	13	50	15	100	6	9
Shelbyville	Spark's Business College	10	15	12	......	......	16
Springfield	Brown's Business College	12	49	15	[2] 105	6	9
Waukegan	Waukegan Business College	1	5	10	......	5	8–12
INDIANA.							
Aurora	Richmond's Aurora Business College.	2	2	10	50	......	6
Brazil	Brazil Business University	2	23	12	90	5	10
Logansport	Indiana Business College	......	5	12	90	......	9
Terre Haute	Brown's Business College	50	128	15	105	......	9
Vincennes	Vincennes Business College	2	6	15	135	6	9
IOWA.							
Chariton	Chariton Business College	1	2	10	......	......	12
Davenport	Brown's Business College	41	90	13	95	5	9
Mason City	Hamilton's University of Commerce.	8	26	13	75	......	10
Muscatine	Brown's Business College	1	8	15	......	6	9
Ottumwa	Iowa Success School	......	10	13	90	......	12
Waterloo	Waterloo Business College	26	81	13	......	8	9–14
KANSAS.							
Abilene	Central Kansas Business College	9	2	9	30	......	4
Chanute	Chanute Business College	......	2	15	100	6	8
Leavenworth	Leavenworth Business College	10	29	[3] 12	......	......	11

[1] Tuition reduced after first month.

[2] Tuition fee for 9 months.

[3] Tuition reduced after second month.

TABLE 16.—*Students, tuition fees, and time required for completing secretarial course in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
KENTUCKY.							
Covington	Curtis Commercial College	64	88	......	$50	$4	6
MAINE.							
Portland	Shaw Business College[1]	......	175	$13	......	6	6
MARYLAND.							
Salisbury	Beacom Business College	7	21	15	......	......	8
MASSACHUSETTS.							
Boston (334 Boylston St.)	Bryant and Stratton Commercial School.	117	454	22	......	8	12-15
Boston (161 Massachusetts Ave.).	Chandler School for Women	......	19	20	......	......	10
Boston (136 Boylston St.).	Franklin Academy	......	4	12	......	4	......
Fall River	Thibodeau Business College	......	12	10	60	......	6
Lawrence	Lawrence Commercial School	4	38	14	150	6	8
New Bedford	Kinyon's Commercial and Shorthand School.	1	16	[2] 35	......	......	......
Northampton	Northampton Commercial College	35	97	15	150	5	10
MICHIGAN.							
Big Rapids	Ferris Institute	10	25	10	75	......	9
Detroit (163-169 Cass Ave.)	Business Institute	......	32	12	......	5	10-14
Detroit (972 Gratiot Ave.)	Central Business College	2	6	10	......	5	9
Lansing	Lansing Business University	2	12	15	125	......	13
MINNESOTA.							
Albert Lea	Albert Lea Commercial College	2	31	15	85	7	9
Minneapolis (5 W. Lake St.).	American Business College	2	2	15	......	5	6-8
Minneapolis	Collegiate Business Institute	......	20	......	175	......	9
St. Paul	Lancaster Business Institute	6	13	12	......	5	......
Winona	Winona Business College	......	16	3	15	......	6-7
MISSOURI.							
Chillicothe	Chillicothe Business College	15	48	......	15	......	2
De Soto	De Soto Business College	1	2	13	95	5	9
Kansas City	Huff's School of Expert Business Training.	25	250	15	......	5	10
Do	Kansas City Business College	42	131	15	[3] 75	8	6-9
Nevada	Nevada Business College	5	25	[4] 15	81	5	8
St. Louis (Delmar and Vandeventer).	Brown's Business College	20	50	12	100	7	8-10
St. Louis (8th and Pine Sts.).	.....do	53	66	12	100	7	9
St. Louis (N. W. cor. 8th and Locust Sts.).	Jones Commercial College	10	5	15	105	6	9
MONTANA.							
Missoula	Missoula Business and Normal College.	......	12	15	100	8	8
NEBRASKA.							
Hastings	Hastings Business College	12	25	10	100	......	8-10
NEW HAMPSHIRE.							
Manchester	Bryant-Stratton Business College	......	4	10	......	4	12-15
NEW JERSEY.							
Bridgeton	Heimbach's Bridgeton Business School.	3	10	15	......	5	8-13
Camden	Camden Commercial College	39	100	16	......	6	8-13
East Orange	Drake College	15	50	13	......	5	9
Newark	.....do	50	100	13	......	......	9
Trenton	Heimbach's Trenton Business School.	15	48	14	......	5	8-13

[1] Includes one branch school.

[2] Tuition for 16 weeks.

[3] Tuition for 6 months.

[4] Tuition reduced after first month.

TABLE 16.—*Students, tuition fees, and time required for completing secretarial course in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
NEW YORK.							
Albany	Albany Business College	3	32	$15	......	......	7–8
Amsterdam	Reynolds Business School	20	34	9	......	$4	7–9
Brooklyn (1317 Broadway).	Alpha School	......	50	10	$85	5	8–9
Brooklyn (65 Flatbush Ave.).	Browne's Business College	288	......	12	......	5	......
Brooklyn (895–899 Flatbush Ave.).	Ellsworth School of Secretaries	55	270	12	......	5	6
Brooklyn (896 Manhattan Ave.).	Heffley Greenpoint School	15	20	12	144	5	12
Brooklyn (243–245 Ryerson St.).	Heffley Institute	93	535	12	......	......	12
Brooklyn (287 Broadway)	Wood's Business School	30	73	12	95	5	9
Lockport	Lockport Business Institute	35	65	10	......	5	6
Middletown	Ramsdell School	3	25	10	......	......	7–10
Mount Vernon	Sherman's Business School	1	14	15	......	6	......
New Rochelle	Westchester Commercial School	4	31	12	......	5	10
New York (413 East 138th St.).	Accountants and Secretaries Business School.	......	4	10	90	......	9
New York (501 West 145th St.).	Audubon Commercial School	......	30	17	150	......	14
New York (802–4–6 Tremont Ave., Bronx).	Bronx Business Institute	9	29	10	90	5	12
New York (830 Westchester Ave.).	Bronx Commercial School	22	64	10	100	[2] 5	10–12
New York (36 West 123d St.).	Eastman-Gaines School	25	250	15	......	5	9–14
New York (280 Madison Ave.).	Institute of Commerce	30	54	15	125	6	6
New York (2105 Seventh Ave.).	Kells School	......	125	10	......	5	6–7
New York (37 East 58th St.).	Merchants' and Bankers' Business School.	95	181	17	......	5	9–12
New York (3219 Third Ave.).	Metropolitan School of Business	3	4	10	......	......	7–10
New York (50 East 42d St.).	Moon's Shorthand and Secretarial Schools.	20	90	......	$15	......	3
New York (144 Columbus Ave., Broadway at 66th St.).	Mull's School	38	90	12	......	6	......
New York (1161 Madison Ave.).	New York Commercial School	2	11	12	......	5	9–18
New York (33 West 42d St.).	New York School of Secretaries	9	151	......	175	......	3
New York (Lexington Ave. and 35th St.).	Packard Commercial School	29	295	18	......	......	......
New York (1931 Broadway).	Paine Uptown Business School	8	33	15	[1] 75	6	7–9
New York (542 Fifth Ave.)	United States School of Secretaries.	7	148	25	150	15	6
New York (200 West 72d St.).	Walworth Business Institute	11	25	18	......	15	12
Peekskill	Peekskill Business College	52	60	10	40	6	8
Rochester	Williams and Rogers Rochester Business Institute.	4	18	13	......	......	12–14
Troy	Troy Business College	43	175	13	75	......	7
Utica	Excelsior School of Business	......	6	10	......	5	8
OHIO.							
Akron	Actual Business College	15	136	13	95	......	9–10
Ashtabula	Ashtabula Business College	3	4	13	100	5	12
Cincinnati (31 East 4th St.).	Campbell Commercial School	1	34	15	85	......	7
Cleveland (Engineers Building, Ontario St.).	Cleveland Business University	51	75	10	......	5	1
Cleveland (Ninth, Prospect, and Huron).	Dyke School of Business	5	32	[3] 20	260	[3] 8	16

[1] Tuition for 6 months. [2] Reduced rate after first month. [3] Tuition reduced after second month.

TABLE 16.—*Students, tuition fees, and time required for completing secretarial course in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
OHIO—continued.							
Columbus	Bliss Business College	5	55	$20	$165	$10	9
Do	Mann's Business Training School	6	40	15	100	......	8
Do	Office Training School	24	64	15	100	8	8
Elyria	Elyria Business College	......	5	10	......	......	......
Marietta	Marietta Commercial College	......	12	13	[1] 95	......	9
Piqua	Ideal Business School	12	27	......	112	......	8–10
Sandusky	Sandusky Business College	4	27	13	125	6	12
Steubenville	Steubenville Business College	1	20	13	99	......	11
OKLAHOMA.							
Sapulpa	Beeson's Commercial College	5	8	15	100	5	6–8
Tulsa	Tulsa Business College	50	100	20	115	10	8–10
PENNSYLVANIA.							
Allentown	American Commercial School	32	47	12	......	5	16
Altoona	Zeth School	4	40	10	......	......	8
Harrisburg	Harrisburg Shorthand School	8	11	10	60	......	6–7
Lock Haven	Lock Haven Institute	5	5	8	40	......	......
Philadelphia (723 Chestnut St.).	American Business College	18	55	10	100	5	10–12
Philadelphia (Pine St., west of Broad).	Peirce School	80	260	20	200	6	12–20
Philadelphia (1002 Market St.).	Taylor Business School	35	82	15	......	5	13
Pittsburgh (132 Stanwix St.).	Duff's College	50	78	15	170	7	12
Pittsburgh (5th Ave. and Grant St.).	Iron City College	16	60	14	......	......	10–12
Pittsburgh (8 W. North Ave.).	Park Institute	8	29	13	112	......	10
Pittsburgh (531 Wood St.).	Pittsburgh Academy	5	111	15	150	7	10
South Bethlehem	South Bethlehem Business College.	13	22	12	......	5	10–15
Wilmerding	Y. M. C. A. Evening School (commercial department).	2	4	......	30	3	......
RHODE ISLAND.							
Providence	Miss Brayton's Special School	......	5	8	......	5	8
Do	Bryant and Stratton Commercial School.	30	93	16	......	......	13–15
Do	Child's Business College	20	45	18	252	8	14
Do	Providence School for Secretaries.	......	100	25	180	......	6–8
Woonsocket	Woonsocket Commercial School	1	......	14	......	6	20
SOUTH CAROLINA.							
Anderson	Cecil's Business School	1	39	20	90	......	8
Spartansburg	Cecil's Business College	5	50	......	90	......	5–6
SOUTH DAKOTA.							
Aberdeen	Aberdeen Business College	15	71	13	105	6	10
TEXAS.							
Tyler	Tyler Commercial College	51	45	......	10	......	1
Yoakum	Baldwin's Business College	......	1	12	......	......	3–6
VERMONT.							
Brattleboro	Clawson-Hamilton Commercial College.	1	2	15	296	......	10–12
VIRGINIA							
Richmond	Smithdeal Business College	1	30	18	......	......	12–24
Roanoke	Roanoke National Business College.	35	33	12	93	......	9–10
Staunton	Dunsmore Business College	3	56	12	75	......	9

[1] If completed in the prescribed time.

Table 16.—*Students, tuition fees, and time required for completing secretarial course in commercial and business schools in 1917-18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
WASHINGTON.							
Seattle	Hyatt-Fowells School of Commerce.	7	40	$15	$100	$6	7½
WEST VIRGINIA.							
Clarksburg	West Virginia Business College	......	20	15	75	......	16
WISCONSIN.							
Appleton	Appleton Business College	......	50	12	......	......	......
Green Bay	Badger Commercial College and Telegraph School.	......	3	15	75	......	24
Janesville	Janesville Business College	1	48	15	130	......	14-18
Merrill	Merrill Commercial College	21	15	14	85	......	......
Milwaukee (102 Broadway and Wisconsin).	Spencerian Business College	......	94	......	......	......	......

Table 17.—*Students, tuition fees, and time required to complete the course in salesmanship in commercial and business schools in 1917-18.*

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
CALIFORNIA.							
Berkeley	Berkeley Business College	8	7	$10	$50	$5	4-6
Chico	Heald's Business College	1	......	15	[1] 90	......	......
San Francisco (220 Golden Gate Ave.).	Y. M. C. A. (commercial department).	24	......	......	......	4	......
Santa Ana	Orange County Business College	6	6	15	[2] 125	7	12
COLORADO.							
Denver	Y. M. C. A. Business School	18	......	......	......	[3] 4	......
CONNECTICUT.							
Hartford	Hillyer Institute, Y. M. C. A	......	27	......	[4] 30	......	......
Do	Merchants and Bankers Business School.	12	3	15	......	5	......
ILLINOIS.							
Cairo	Brown's Business College	3	3	13	36	......	......
Chicago (19 S. La Salle St.).	Central Y. M. C. A. Institute (commercial department).	70	......	......	[5] 20	......	......
Chicago (33-37 W. Jackson Blvd.).	Chicago Business College	20	130	12	63	6	......
Chicago (1621 W. Division St.).	Y. M. C. A. Commercial High School.	4	......	......	36	2	......
East St. Louis	Summers' College of Commerce	3	......	10	60	......	6
Flora	Orchard City College	21	36	[6]12	......	......	7
Moline	Brown's Business College	10	12	15	25	6	2½
Shelbyville	Sparks' Business College	50	125	12	......	......	......

[1] Tuition fee for 8 months.

[2] Tuition fee for one year.

[3] Lesson one night each week.

[4] Tuition fee for night course.

[5] Tuition fee for 17 weeks.

[6] Includes books and supplies.

TABLE 17.—*Students, tuition fees, and time required to complete the course in salesmanship in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
INDIANA.							
Indianapolis	Y. M. C. A. Night School (commercial department).	19	......	......	$20	......	3
New Albany	New Albany Business College	14	36	$13	34	......	2½
Richmond	Richmond Business College	32	49	15	......	$6	3
IOWA.							
Waterloo	Waterloo Business College	26	81	......	......	8	......
KANSAS.							
Abilene	Central Kansas Business College	26	2	9	30	......	4
KENTUCKY.							
Louisville	Y. M. C. A. Schools (commercial department).[1]	36	......	......	20	5	5
MAINE.							
Portland	Shaw Business College [2]	61	85	13	......	6	......
MARYLAND.							
Baltimore (Franklin and Cathedral Sts.).	Association Institute (commercial department).	13	......	......	[3] 25	......	8
MASSACHUSETTS.							
Springfield	Y. M. C. A. (commercial department).[1]	16	......	......	28	......	2½
Worcester	Northeastern College, School of Commerce and Finance.[1]	22	......	......	23	......	4½
MICHIGAN.							
Big Rapids	Ferris Institute (commercial department).	25	2	10	75	......	9
Detroit (Grand Circus Park).	Detroit Institute of Technology	24	......	......	[3] 35	......	8½
Ironwood	Ironwood Business College	8	44	10	50	......	6
Lansing	Lansing Business University	19	14	8	18	......	2½
MINNESOTA.							
Albert Lea	Albert Lea Commercial College	24	3	15	60	7	5–7
Austin	University of Southern Minnesota (commercial department).	3	12	10	80	10	......
Minneapolis (44 S. 10th St.).	Central Branch Y. M. C. A. (commercial department).	32	......	......	30	......	......
St. Paul	Y. M. C. A. Night School (commercial department).	21	......	......	......	[4] 18	......
Winona	Winona Business College	6	22	5	30	......	6
MISSOURI.							
St. Louis (Grand and Franklin).	Ralph Sellew Institute Y. M. C. A. (commercial department).[1]	22	......	......	15	......	5
NEBRASKA.							
Omaha	Y. M. C. A. Night School (commercial department).	33	......	......	30	6	6
NEW JERSEY.							
Camden	Y. M. C. A. Institute (commercial department).[1]	14	......	......	15	......	4
Newark (111 Halsey St.)	Y. M. C. A. (commercial department).	21	......	......	13	......	2

[1] Night school.
[2] Includes one branch school.
[3] Tuition for night course.
[4] Tuition for 17 weeks.

TABLE 17.—*Students, tuition fees, and time required to complete the course in salesmanship in commercial and business schools in 1917–18*—Continued.

Location.	Name.	Students.		Tuition fees in—			Months required for completing day course.
		Men.	Women.	Day course per month.	Day course for entire course.	Night course per month.	
1	2	3	4	5	6	7	8
NEW YORK.							
Brooklyn (1121 Bedford Ave.).	Bedford Branch Y. M. C. A. School (commercial department).[1]	63	......	......	$23	......	7½
Brooklyn (55 Hanson Place).	Marquand School	79	......	......	[2] 25	......	......
Buffalo (Mohawk and Franklin Sts.).	Association Institute, Y. M. C. A.	13	......	......	......	$5	6
Jamestown	Jamestown Business College	55	125	$12	......	......	4
New York (215 West 23d St.).	Chelsea School	67	......	......	[2] 25	......	4
New York (36 West 123d (St.).	Eastman-Gaines School	100	50	......	......	......	3–5
Peekskill	Peekskill Business College	19	11	12	40	6	10
NORTH CAROLINA.							
Durham	Durham Business School	5	8	......	25	......	3
OHIO.							
Ashtabula	Ashtabula Business College	4	2	13	50	5	4
Dayton	Y. M. C. A. Institute (commercial department).[1]	32	......	......	25	......	14
PENNSYLVANIA.							
Mahanoy City	McCann's School	15	20	......	......	......	8–10
Philadelphia (723 Chestnut St.).	American Business College	8	20	10	100	5	10–12
Pittsburgh (132 Stanwix St.).	Duff's College	13	8	15	......	7	4
Wilmerding	Y. M. C. A. Evening School (commercial department).	15	......	......	15	......	6
TEXAS.							
Dallas	Y. M. C. A. Evening School (commercial department).	23	......	......	20	......	5
Houston	Y. M. C. A. Schools (commercial department).	28	......	......	15	......	4
Tyler	Tyler Commercial College	692	614	......	10	......	1
WASHINGTON.							
Aberdeen	Grays Harbor Business College	18	160	15	60	......	4
Seattle	Y. M. C. A. School (commercial department).	125	......	......	[3] 50	......	4
WEST VIRGINIA.							
Charleston	Capital City Commercial College	6	10	6	......	......	......
WISCONSIN.							
Green Bay	Badger Commercial College and Telegraph School.	25	41	......	25	......	6
Janesville	Janesville Business College	13	5	15	130	......	......
Rice Lake	Potter Business College	9	25	12	72	......	6

[1] Night school. [2] Tuition fee, night school. [3] Tuition fee for entire course in night school.

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18.*

Location.	Institution.	Teachers		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ALABAMA.													
Birmingham	Massey Business College	2	5	205	761	15	25	220	786	295	30	5	2
Do.	Southern Business College	1	2	1	24	7	8	8	32	22	13	5½	2½
Do.	Wheeler Business College	3	6	152	553	102	100	254	653	165	35	6	2
Dothan	Campbell Institute of Shorthand and Accounting	1	2	53	94			53	94	45		7	
Florence	Florence Business College		1	6	32	2	4	8	36	20	3	6	2
Mobile	Ebeltoft Private School of Shorthand and Typewriting.		2	15	117			15	117			5	
Do.	Mobile Business College	1	2	50	300	70	100	120	400	30	15	5½	2
Montgomery	Draughon's Practical Business College	2	4	49	202			49	202			6	
Do.	Massey Business College	2	3	110	300	15	15	125	315	175	15	6	2
ARIZONA.													
Phoenix	Lamson Business College	2	4	50	269	41	50	91	319	89	37	6	2
ARKANSAS.													
Conway	James Business College	1	1	34	38	8	2	42	40	28	5	8	2½
Fort Smith	Draughon's Practical Business College	3	3	100	290			100	290	200		6¾	
Do.	Fort Smith Commercial College	2	1	27	135	5	15	32	150	55	12	7	2
Little Rock	Draughon's Practical Business College	5	10	219	486	53	66	272	552	325	60	6	2
Do.	Hines Business College	3	1	24	126	10	27	34	153	85	7	6	2
Pine Bluff	James Business College	1	1	8	56	11	27	19	83	40	15	5	2
Siloam Springs	Siloam Springs Commercial College	1	1	5	42			5	42	22		6	
CALIFORNIA.													
Berkeley	Berkeley Business College	2	4	7	195	49	69	56	264	45	30	6	2
Chico	Heald's Business College	1	6	19	87	26	54	45	141	50	45	6	2
Fresno	Heald's Fresno College	4	5	82	364	58	126	140	490	200	40	6	2
Glendale	Glendale Commercial School		2	1	35	9	5	10	40	20	5	5	5
Los Angeles (625 S. Hope St.)	California-Brownsberger Commercial College	6	4	161	519	30	50	191	569	375	50	5½	2

Los Angeles (602 Chamber of Commerce Bldg.).	Central Business College	1	2	9	262	11	77	20	339	51	15	5	2
Los Angeles (224 S. Spring St.).	Coast College of Lettering	1		10	10	3		13	10	5	3	8	2
Los Angeles (631 S. Spring St.).	Hollman Business College	3	5	85	215	35	145	120	360	150	40	6	2
Los Angeles (906 S. Main St.).	Mackay Business College	4	6	75	673	24	214	99	887	118	35	6	3
Los Angeles (4th and Santa Fe Ave.).	Santa Fe Telegraph School	1	1	16	64			16	64	26		6	
Los Angeles (Cor. 2d and Spring Sts.).	School of Commerce, Accounts and Finance, Southwestern University.	12				77	18	77	18		20		1½
Los Angeles (328 Fourth St. at Spring).	Shorthand Institute		1	2	13	1	4	3	17	11	5	5½	2
Los Angeles (320 West 8th St.).	Willis-Woodbury Business College	2	7	104	560	48	80	152	640	200	35	5½	2
Napa	Napa Business College	1	1	14	54	8	33	22	87	35	10	6	2
Oakland	Heald's Business College	3	7	50	289	40	200	90	489	312	235	6	2
Pasadena	Pott's Business College	1	5	47	310	57	124	104	434	114	45	5	2
Pomona	Pomona Business College	1	1	9	61	4	6	13	67	21	6	5½	2
Sacramento	Heald's Business College	5	7	100	320	80	200	180	520	200	60	5½	2
San Diego	California Commercial College	2	5	35	269	25	61	60	330	130	18	8	2
San Diego	Kelsey-Jenney Commercial College	2	4	51	275	39	46	90	321	120	20	6	2
San Diego	San Diego Business & Academic College	1	2	40	20	14	12	54	32	56	18	6	2
San Francisco (2416 "A" Mission St.).	Chicago Business College		5		100		50		150	60	30	5½	2
San Francisco (1215 Van Ness Ave.).	Heald's Business College	24	20	1,600	1,700	1,500	1,900	3,100	3,600	3,000	2,900	6	2
San Francisco (600 Sutter St.).	Munson School for Private Secretaries	1	18	56	1,174	74	554	130	1,728	500	175	6	2
San Francisco (703 Market St.).	School of Accounts	1	1			40	33	40	33		12		2
San Francisco (935 Buena Vista Ave.).	Success Commercial Academy	1	4	10	56	20	64	30	120	40	40	6	2
San Jose (92 S. Second St.)	Heald's Business College	4	4	74	436			74	436			5	2
Santa Ana (626 N. Main St.)	Orange County Business College	2	2	35	90	17	58	52	148	65	28	6	2
Santa Barbara	Santa Barbara Business College	1	2	18	88	21	52	39	140			5½	2
Santa Rosa	Santa Rosa Business College	2	3	56	167	23	34	79	201	140	30	6	2
COLORADO.													
Boulder	Colorado Business College	2	2	38	95	23	34	61	129	55	20	5½	2
Canon City	Hart's Business College		2	8	63	10	9	18	72	20	8	5½	2
Colorado Springs	Brown's Business College	1	6	54	197	42	76	96	273	100	50	5½	2
Delta	Delta Business College	1	2	12	33	9	15	21	48	30	18	7	2½
Denver	Barnes Commercial School	8	20	200	948	125	295	325	1,243	400	175	5½	2
Do	Central Business College	3	7	150	100	150	300	300	400	175	90	5½	2
Do	Modern School of Business	4	3	234	82	79	50	313	132	107	27	5½	2
Do	Parks Business School	3	3	75	125	15	35	90	160	100	15	5½	2
Do	Woodworth Shorthand College	1	6	16	114			16	114	75		6	
Grand Junction	Hoel-Ross Business College	3	2	40	175	20	15	60	190	110	20	6	2
Greeley	Greeley Commercial College	1	2	23	67	7	13	30	80	40	10	6	2
Pueblo	American Business College	1	6	15	190	45	60	60	250	80	50	5	2
Trinidad	Colorado State College of Business	2	1	30	90	10	10	40	100	110	15	5	2

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CONNECTICUT.													
Bridgeport	Bridgeport Business College	4	....	9	77	29	48	38	125	48	37	5	2½
Do.	New Gutchess College and Secretarial School	2	5	14	62	32	138	46	200	50	75	4½	3
Danbury	Danbury Shorthand School	....	1	....	18	....	....	....	18	10	....	4	....
Derby	Derby Business College	1	4	7	23	19	37	26	60	25	50	5	3
Hartford	Connecticut Business College	2	6	17	43	20	73	37	116	38	41	5	2
Do.	Huntsinger Business School	3	8	25	175	37	177	62	352	150	125	5	3
Do.	Merchant's and Banker's Business College	2	2	20	30	20	40	40	70	40	60	5	3
Do.	Modern Business School	1	5	6	41	4	26	10	67	44	24	5	2
Do.	Morse Business College	7	7	88	126	82	106	170	232	200	100	6	2
Do.	Winslow's Select Shorthand School	1	1	2	38	2	39	4	77	15	10	5	3
Meriden	Pequod Business School	1	5	3	72	28	85	31	157	45	164	5½	2
Middletown	Middletown Business College	1	3	14	74	49	59	63	133	40	50	5½	3
New Britain	Hardware City Business College	1	1	5	12	12	18	17	30	12	24	5	2
Do.	Smith Business School	1	3	2	30	20	76	22	106	28	90	5	2
New Haven	Connecticut Business University and School of Tutoring.	3	....	12	39	19	35	31	74	32	41	6	2½
Do.	Royal Business College	1	1	10	32	25	100	35	132	35	50	4	2
Do.	Stebbing Commercial School	2	4	6	105	26	124	32	229	34	42	4, 6	3
Do.	Stone Business College	3	5	70	206	48	115	118	321	101	90	6	3
New London	New London Business College	3	2	12	142	2	99	14	241	101	55	5½	3
Norwich	Norwich Commercial School	1	4	10	50	28	50	38	100	60	50	5	3
South Norwalk	Merrill Business College	1	2	15	68	84	75	99	143	....	....	6	2
Stamford	Lee's Commercial College	2	2	2	31	10	52	12	83	14	30	5	3
Waterbury	Booth and Bayliss Commercial School	1	3	....	28	14	27	14	55	25	45	5	2½
Do.	Waterbury Business College	3	9	31	206	117	301	148	507	135	200	4½	2½
DELAWARE.													
Wilmington	Beacon Business Colleges	9	10	111	333	264	242	375	575	200	250	5½	3
Do.	Goldey College	6	5	200	320	445	130	645	450	200	225	5½	3

DISTRICT OF COLUMBIA.													
Washington (12th and F Sts. NW.).	Steward's Business College	22	18	86	494	421	555	507	1,049	120	167	5½	2
Washington (1417 G St. NW.).	Temple School of Shorthand and Typewriting	3	15	44	304	469	1,070	518	1,374	300	450	5½	2½
Washington (1321 G St. NW.).	Washington Business College	5	6	61	287	211	335	272	572	40	90	5	2½
Washington (311 E. Capitol St.)	Wood's Commercial School	2	7	56	215	241	536	297	751			5½	2½
FLORIDA.													
De Land	Beeler Business College	1	2	24	81	7	18	31	119			5	2
Jacksonville	Draughon's Practical Business College	1	3	56	178	16	15	72	188	75	25	6	2
Lakeland	Florida Commercial Institute	1	3	15	53	4	9	19	62	35	6	5½	2
Miami	Pan-American College of Commerce	2	8	50	400	50	100	100	500	180	75	5	2½
Orlando	Southern School of Commerce	1	1	17	96	26	23	43	118	52	14	5	2
St. Petersburg	St. Petersburg Business College	1	1	11	54	5	10	16	64	12	8	5	2
Do	Southern School of Commerce	1	1	5	50	5	10	10	60	20	10	5	3
Tampa	Tampa Business College	2	4	206	327	68	41	274	368	212	57	5½	2
GEORGIA.													
Athens	Athens Business College	3	2	55	160			55	160	95			
Atlanta	Atlanta Business College	2	3	36	138	15	18	51	156	75	20	7½	2
Do	Draughon's Practical Business College	4	2	35	315	15	35	50	350	200	15	6½	2
Do	Simplex Shorthand School			15	135	35	15	50	150	40	10	8½	2
Do	Southern Shorthand and Business University	5	6	201	670	28	57	224	727	337	16	7½	2
Augusta	Osborne's Business College	2		30	40			30	40	58		7	
Do	St. Patrick's Commercial Institute	5		160				160		140		4½	
Columbus	Massey Business College	1	2	62	100			62	100	62		5–7	
Macon	Georgia-Alabama Business College	4	4	185	243			185	243	280		7	
Newnan	Southern School of Telegraphy	2		74	20			74	20	20		6	
Valdosta	South Georgia Business College	2	6	58	84			58	84	55		7	
IDAHO.													
Idaho Falls	Gem State Business College	1	3	32	98	8	45	40	143	60	20	8	2
Lewiston	Lewiston Business College	1	1	10	70			10	70	75		8	
Moscow	Creekmur's Business College	1	1	21	66	14	16	35	82			6	2
Twin Falls	Gregg Business College	1	1		20	4	10	4	30	30	15	8	2
ILLINOIS.													
Alton	Brown's Business College	8	3	88	97	118	99	206	196	70	94	6½	2
Aurora	Aurora Shorthand School		1	1	9	6	15	7	24	8	14	6	2
Do	Gregg-Aurora Business College	2	3	32	80	26	96	58	176	50	60	5½	2
Belleville	Belleville Commercial College	3	1	42	62	34	27	76	89	72	30	6	2
Cairo	Brown's Business College	1	2	37	75	35	46	72	121	84	22	6	2
Chicago (5707 Lake St.)	Austin Business College	1	1	3	27	7	13	10	40	28	18	5½	2
Chicago (1145 Blue Island Ave.)	Birmingham Shorthand School		2	6	27	2	20	8	47	20	20	6	3
Chicago (64 W. Randolph St.)	Boyd Shorthand School	2	3	10	190	40	160	50	350	50	25	5	2
Chicago (33–37 W. Jackson Blvd.).	Chicago Business College	2	5	5	27	4	89	9	116	60	70	6	2

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ILLINOIS—continued.													
Chicago (4732 Irving Park Block).	Columbia Business College, Irving Park	1	4	36	123	35	76	71	199	151	105	5¼	2
Chicago (6233–35 Halsted St.)	Englewood Business College	4	6	105	517	25	135	130	652	350	100	6	2
Chicago (6 N. Michigan Ave.)	Gregg School	3	9	119	896	340	478	459	1,374	350	250	5¼	2
Chicago (1542 W. Madison Ave.)	Illinois Business College	2	5	14	153	32	118	46	271	150	125	6	2
Chicago (1208 East 63d St.)	MacCormac School	2	5	56	219	95	130	151	349	125	90	6	2
Chicago (37 S. Wabash Ave.)	Metropolitan Business College	19	22	378	1,554	659	1,375	1,037	2,929	......	......	5¾	2
Chicago (616 S. Michigan Ave.)	National Institute of Secretaries	2	2	50	1	20	19	70	20	12	10	6	2
Chicago (1632 Milwaukee Ave.)	Northwestern Business College	1	6	75	253	65	160	140	413	154	140	6	2
Chicago (6309 Yale Ave.)	Orr's Business College	3	6	73	242	37	94	110	336	160	60	7	2
Chicago (1134–40 Wilson Ave.)	Pierson Business College	3	7	110	410	99	198	209	608	240	187	6½	2
Chicago (4306 Grand Blvd.)	Select School of Shorthand and Typewriting	......	1	3	47	5	45	8	92	......	......	5½	2
Chicago (64 W. Randolph St.)	Success Shorthand School	9	2	80	218	194	194	274	412	96	119	5	2½
Chicago (Pullman Station, 11, 112 S. Michigan Ave.).	Trook's Commercial School	1	3	18	108	47	60	65	168	40	35	5½	2
Chicago (122 S. Michigan Blvd.)	Walton School of Commerce	8	......	......	......	255	66	255	66	......	60	......	2
Chicago (638–640 West 55th St.)	Watson's Business College	1	4	69	134	47	74	116	208	135	75	5½	2
Chicago Heights (92 Illinois St.)	Chicago Heights Business College	1	1	9	43	10	22	19	65	40	20	5½	2
Danville	Brown's Business College	3	5	60	208	90	154	150	362	100	100	8	2
Decatur	Brown's Decatur Business College	3	6	109	242	110	171	219	413	......	......	7½	2
Do	Lyon Business College	2	3	22	75	31	55	53	130	35	30	6	2
East St. Louis	Brown's Business College	2	3	46	190	110	108	156	298	83	64	6	2
Do	Summers College of Commerce	4	5	22	150	40	73	62	223	85	70	5	2
Evanston	Evanston Business College	1	2	16	107	19	73	35	180	40	35	5	2
Do	Watson Business College	......	2	10	70	15	55	25	125	35	25	6	2½
Flora	Orchard City College	2	2	21	36	......	......	21	36	48	......	7	......
Freeport	Brown's Business College	1	2	29	57	17	32	46	89	50	30	8	2
Galesburg	do	2	3	109	257	25	106	134	363	150	40	6½	2
Kankakee	do	1	4	40	147	44	66	84	213	85	50	8	2½
La Grange	Paterson Business Institute	2	3	13	87	31	59	44	146	40	35	5	3
Litchfield	Litchfield Business College	1	1	4	23	8	12	12	35	......	......	6	2

Mattoon	Mattoon Business College	1	4	25	108	13	36	38	139			7½	2½
Moline	Brown's Business College	1	3	21	162	34	63	55	225	85	60	6½	3
Murphysboro	Southwestern Commercial College	1	2	4	49	11	26	15	75	60	20	5½	2
Olney	Olney Business College	1	3	25	42	8	15	33	57	50	20	6	2
Ottawa	Brown's Business College	1	3	23	40	19	39	42	79	40	30	7½	2½
Pontiac	Capes Shorthand School		1			1	27	1	27		25		2
Quincy	Gem City Business College	9	14	419	699			419	699	500		5½	
Rockford	Brown's Business College	2	4	75	219	51	63	126	282	95	46	6¾	2
Rock Island	do	1	2	25	95	25	35	50	130	70	40	7	3
Shelbyville	Sparks Business College	3	4	50	125			50	125	80		8½	
Springfield	Brown's Business College	2	6	69	236	96	290	165	526	140	125	7½	2
Do	Illinois Business College	2	3	38	121	82	121	120	242			6	2
Sterling	Brown's Business College	1	4	62	127	7	23	69	150	100	15	6¾	2
Waukegan	Waukegan Business College	1	4	32	60	43	54	75	114	62	65	6	2½
INDIANA.													
Anderson	Indiana Business College	1	1	27	88	16	50	43	138	30	10	6½	2
Aurora	Richmond-Aurora Business College	1	1	11	29	10	21	21	50	35	20	6	2½
Bedford	Bedford Business University	1	2	4	30	6	10	10	40	20	12	6	2
Brazil	Brazil Business University	2	1	32	83	32	36	64	119	55	30	5¾	2
Columbus	Columbus Business College		1	2	41	10	23	12	64	27	15	6½	2
Crawfordsville	Crawfordsville Business College	1		12	25		9	12	34	35	8	6	2
Elkhart	Elkhart Business College	1	2	30	75	5	25	35	100	45	20	5½	2
Evansville	Lockyear's Business College	4	3	69	417	18	52	87	469	350	37	5	3
Fort Wayne	International Business College	7	3	225	525	120	280	345	805	400	300	5	2
Frankfort	Frankfort Business College		3	6	63	2	39	8	102	14	9	7½	2
Indianapolis	Central Business College	5	12	222	687	151	346	373	1,033	325	155	6¾	2½
Do	Iles De Vor Commercial School		2	5	70	8	12	13	82	25	15	6	2
Jeffersonville	Clark School of Business	1	1	9	40	33	62	42	102	18	31	4½	2
Kokomo	Kokomo Business College	1	1	21	80	8	29	29	109	45	10	6½	2
La Fayette	La Fayette Business College	3	2	35	265	35	65	70	330	95	40	7	2
La Porte	La Porte Business College		2	3	35	7	15	10	50	25	12	5¾	2
Logansport	Indiana Business College	1	2	20	93	8	31	28	124			6½	2
Marion	Marion Business College	3	3	64	142	36	118	100	260	80	40	7	2½
New Albany	New Albany Business College	3	2	25	226	50	45	75	271	85	47	5½	2
Newcastle	Indiana Business College	1	1	12	41	12	55	24	96	40	30	8	2½
Noblesville	Noblesville Business College	1	1	4	46			4	46	28		6	
Peru	Peru Business College	1	1	3	44	3	41	6	85	16	14	7½	2½
Richmond	Richmond Business College	2	2	46	140	15	43	61	183	53	20	6½	2
Seymour	Seymour Business College	1	4	15	85	10	40	25	125	40	35	7	2
South Bend	Kelley Business School	1	2	8	24	4	22	12	46	29	23	7	2
Do	South Bend Business College	3	3	83	321	27	27	110	348	210	35	5	2
Do	Thomas School of Stenography and Typewriting	1	2	2	40	11	44	13	84	30	30	5	2
Terre Haute	Brown's Business College	2	5	50	275	25	206	75	481	180	50	6¾	2
Do	Wabash Commercial School			50	150	75	105	125	255	75	60	7	2
Valparaiso	Dodge's Telegraph, Railway Accounting and Radio (wireless) Institute.	7	3	490	110			490	110	175		10	
Vincennes	Vincennes Business College	1	2	30	90	23	47	53	137	34	15	8½	2
Washington	Washington Business College		3	9	36	11	12	20	48	30	20	6½	2

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
IOWA.													
Belle Plaine	Belle Plaine Business College	1	1	2	16	5	13	7	29	16	15	5	2½
Cedar Rapids	Cedar Rapids Business College	4	8	213	551	......	......	213	551	......	......	6	......
Chariton	Chariton Business College	1	1	6	16	......	......	6	16	7	......	5½	......
Clinton	Clinton Business College	1	3	35	100	13	21	48	121	......	......	7	2
Council Bluffs	Boyle's Iowa College	......	......	40	149	41	79	81	228	64	30	6	2
Do	Hammill College and Business Institute	2	7	21	170	29	40	50	210	75	28	5½	2
Davenport	Brown's Business College	2	5	214	340	91	95	305	435	170	55	7	2
Decorah	Valder College	3	3	100	175	......	......	100	175	......	......	6	......
Des Moines	Capital City Commercial College	4	11	267	823	45	114	312	937	350	20	8	2
Dubuque	Bayless Business College	2	5	53	152	29	75	82	227	110	60	5½	2
Fort Dodge	Fort Dodge Business College	1	2	19	98	......	......	19	98	45	......	7	......
Fort Madison	Fort Madison Business College	2	2	45	60	10	15	55	75	125	20	6	2
Iowa City	Irish's Business College	2	4	72	160	......	......	72	160	......	......	7	......
Keokuk	Tri-State Commercial College	1	1	6	38	4	22	10	60	22	18	6½	2
Mason City	Hamilton's University of Commerce	1	3	80	270	......	......	80	270	180	......	6	......
Muscatine	Brown's Business College	1	1	41	65	21	27	62	92	......	......	6½	3
Oelwein	Oelwein Business College	1	3	14	88	6	42	20	130	30	35	5½	2
Ottumwa	Iowa Success School	1	5	15	150	10	25	25	175	100	25	6	2
Do	Ottumwa Commercial College	2	2	128	165	17	15	145	180	62	12	5	2½
Sioux City	National Business Training School	3	7	87	323	58	160	145	483	180	50	6	2
Waterloo	Waterloo Business College	4	4	119	283	37	77	156	360	143	18	7½	2
KANSAS.													
Abilene	Central Kansas Business College	2	2	125	40	......	......	125	40	100	......	8	......
Arkansas City	Arkansas City Business College	......	4	54	96	13	7	67	103	70	7	5½	2
Chanute	Chanute Business College	1	3	25	112	20	19	45	131	56	21	6	2
Coffeyville	Coffeyville Business College	2	2	30	192	21	89	51	281	76	24	5½	2
Concordia	Concordia Normal and Business College	3	1	12	60	......	......	12	60	65	......	7	......
Emporia	Emporia Business College	1	3	60	110	......	......	60	110	80	......	6	......
Fredonia	Fredonia Business College	......	2	21	83	......	......	21	83	35	......	8	......
Hutchinson	Salt City Business College	11	5	250	858	50	42	300	900	800	30	8½	2

Iola	Haslett Institute of Business	1	2	20	41	......	......	20	41	......	......	6	......
Lawrence	Lawrence Business College	3	4	204	189	10	21	214	210	165	20	8	2
Leavenworth	Leavenworth Business College	1	3	26	85	48	90	74	175	35	47	5½	2
Manhattan	Manhattan Business College	1	2	8	53	......	......	8	53	15	......	8	......
Newton	Newton Business College	2	1	50	80	15	25	65	105	60	20	7	2
Ottawa	Ottawa Business College	2	4	68	107	12	24	80	131	50	8	6	2
Parsons	Parson's Business College	3	6	30	160	15	25	45	185	100	20	8	2
Salina	Kansas University of Commerce	13	11	274	506	35	10	309	516	350	20	7½	2
Topeka	Dougherty's Business College	3	1	24	162	26	66	50	228	70	20	8	2
	Santa Fe Railway & Telegraph School	2	1	62	71	......	......	62	71	45	......	6	......
Do	Topeka Business College	4	4	202	247	80	176	282	423	170	104	6	2
Wichita	Dague Business College	1	3	120	230	35	215	155	445	85	35	6	2
Do	Wichita Business College	4	8	250	500	20	30	270	530	300	30	6	2
KENTUCKY.													
Covington	Curtis Commercial College	1	6	48	62	102	113	150	175	48	72	5	2
Danville	Danville Business School	......	3	6	54	......	......	6	54	58	......	8	......
Lexington	Fugazzi School of Business	......	4	25	275	20	160	45	435	200	40	6½	2
Louisville	Bryant and Stratton Business College	3	3	46	355	86	70	132	425	176	62	6	2½
Louisville	Clark School of Business	1	3	40	145	42	103	82	248	80	60	4½	2
Do	Creager Business School	3	2	25	134	24	48	49	182	40	25	6	2
Do	Spencerian Commercial School	4	4	171	344	84	158	255	502	252	110	6½	2
LOUISIANA.													
Baton Rouge	Baton Rouge Business College	3	3	65	235	35	65	100	300	80	75	6	2
Lake Charles	Lake Charles Business College	1	2	29	126	25	18	54	144	50	15	5	2
New Orleans (407 Pythian Temple.)	Guillaume College	1	1	2	96	18	30	20	126	......	......	6	3
New Orleans (613 Canal St.)	Reaser School	2	1	12	48	24	33	36	81	30	30	5	2
New Orleans (603 St. Charles St.)	Soulé Commercial College	12	15	430	529	625	198	1,055	727	800	700	5½	2½
New Orleans (723 Canal Bank Bldg.).	Twentieth Century School	......	1	4	73	10	24	14	97	20	10	6	2½
Shreveport	Draughon's Practical Business College	2	3	90	239	14	43	104	282	91	22	6	2
MAINE.													
Auburn	Maine School of Commerce	1	3	12	43	26	34	38	77	30	30	5	2
Augusta	Shaw's Business College	1	1	12	39	9	22	21	61	40	25	6	2
Bangor	Beal Business College	1	2	14	74	5	9	19	83	......	......	5½	2
Do	Doe Business College	1	1	4	7	4	4	8	11	6	2	5½	2
Lewiston	Bliss Business College	2	2	40	50	31	23	71	73	130	40	5½	2
Portland	Gray's Portland Business College	3	5	69	211	......	......	69	211	105	......	6	......
Do	Miss Sawyer's Shorthand School	......	1	......	37	1	4	1	41	15	......	6	......
Do	Shaw Business College	7	7	116	332	28	51	144	383	......	......	6	2
Rockland	Rockland Commercial College	2	3	11	54	......	......	11	54	36	......	5½	......
Saco	Thornton Academy	......	2	26	62	......	......	26	62	80	......	5	......
Waterville	Thomas Business College	1	2	18	27	24	35	42	62	35	30	5	2

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MARYLAND.													
Baltimore (210 East 25th St.)	American Shorthand School	1				4	20	4	20				
Baltimore (345 North Charles St.).	Calvert Business College	1	4	10	140	25	50	35	190			4½	2
Baltimore (9-11 West Baltimore St.).	Eaton and Burnett Business College	4	4	82	323	134	226	216	549	150	160	5	2
Frederick	Frederick City Night School	2				6	44	6	44		30		[1] 3
Hagerstown	Columbia College	1	4	42	99	20	36	62	135			6	2
Salisbury	Beacom Business College	1	2	40	98	15	33	55	131	74	18	5½	2
MASSACHUSETTS.													
Boston (18 Boylston St.)	Boston School of Telegraphy	6	1	19	59	58	134	77	193	70	85	4	2
Boston (334 Boylston St.)	Bryant and Stratton Commercial School	15	21	369	822	208	357	577	1,179	750	375	5	2
Boston (136 Federal St.)	Burrough's Adding Machine Company's School		2		125		35		160	40	25	7	2
Boston (161 Massachusetts Ave.)	Chandler School for Women		11	1	48	7	32	8	80	27	39	5	2
Boston (Temple Place)	Clark School of Shorthand and Typewriting	2	4	24	105	65	248	89	353	47	100	4	2
Boston (899 Boylston St.)	Eastern Radio Institute	6		504	6	403		907	6	55	90	4	2
Boston (136 Boylston St.)	Franklin Academy		7	3	51	14	126	17	177	40	75	3	2
Boston (711 Boylston St.)	Higgins Commercial Machine School				271		229		500	77	33	7	2
Boston (248 Boylston St.)	Pierce Shorthand and Secretarial School	1	5		100				100	75		6	
Fall River	Fall River School of Commerce	1	5	30	81	30	50	60	131	105	75	5	2
Do.	Thibodeau Business College	3	6	47	62	101	59	148	121	104	137	5	2
Greenfield	Greenfield Commercial School	1	2	4	45	17	55	21	100			5½	2
Lawrence	Lawrence Commercial School	4	6	24	50	106	94	130	144	38	112	5¾	2
Lynn	Lynn Branch Burdett Business College	3	2	41	136	56	44	97	180	81	36	5	2
Malden	Malden Commercial School	2	4	22	131	48	82	70	213	85	80	5	2¼
New Bedford	Benton's Business School	1	2	5	32	15	18	20	50	32	20	5	2
Do.	Kinyon's Commercial and Shorthand School	1	3	27	56	42	79	69	135	70	75	5¼	2
Northampton	Northampton Commercial College	4	6	56	150	63	305	119	455	120	180	5½	2
Pittsfield	Berkshire Business College	1	2	27	73	23	52	50	125	60	30	6	2
Do.	Pittsfield Commercial School	1	2	7	32	23	59	30	91	15	35	5½	2¼
Springfield	Bay Path Institute	3	12	49	364	58	181	107	545	177	88	5	2

Do.	Springfield Civil Service and Commercial School	2	11	71	143	68	108	139	251	131	92	......	......
Stoughton	Maltby School of Shorthand	1	2	8	22	18	41	21	63	18	2	5	2
Taunton	Bristol School	1	4	7	21	22	23	29	44	27	32	5	2
Worcester	Worcester Business Institute	6	7	66	338	65	266	131	604	220	150	5	2½
MICHIGAN.													
Adrian	Brown's Business University	1	2	43	44	......	......	43	44	60	......	5½	......
Alpena	Alpena Business College	......	3	15	30	13	21	28	51	30	24	6	2
Battle Creek	Cornell Shorthand School	1	2	19	41	24	15	43	56	24	32	6½	2½
Do.	Michigan Business and Normal College	3	1	58	100	......	......	58	100	112	......	7½	......
Big Rapids	Ferris Institute	10	4	350	510	......	......	350	510	400	......	6	......
Detroit (163–169 Cass Avenue)	Business Institute	6	18	324	1,249	162	624	486	1,873	600	250	5½	2
Detroit (972 Gratiot Ave.)	Central Business College	2	4	24	101	40	85	64	186	80	70	5	2
Escanaba	Cloverland Commercial College	2	2	19	106	54	75	73	181	50	40	5	2
Flint	Baker Business University	4	8	108	280	97	135	205	415	130	80	5½	2
Grand Rapids	Churchill's Business Institute	......	4	14	46	......	......	14	46	50	......	6	......
Do.	McLachlan Business University	3	7	298	610	86	250	384	860	300	100	5	2
Hancock	Twin City Commercial College	......	3[1]	18	46	12	46	30	92	45	30	6	2½
Iron Mountain	Actual Business College	1	......	8	22	5	12	13	34	12	33	5	2
Ironwood	Ironwood Business College	1	1	10	53	18	16	28	69	41	23	7½	2
Ishpeming	Ishpeming Business College	1	1	5	30	5	10	10	40	25	10	5½	2
Jackson	Allen's Business College	2	2	6	72	9	30	15	102	50	20	5½	2
Do.	Jackson Business University	2	2	20	90	......	......	20	90	60	......	5½	......
Kalamazoo	Maher's Business College	1	2	15	49	22	38	37	87	30	40	8	3
Do.	Parson's Business College	2	4	56	168	14	25	70	193	100	25	6	2
Lansing	Lansing Business University	2	3	56	204	35	61	91	265	92	43	7	2
Laurium	Laurium Commercial School	2	3	22	123	16	82	38	205	60	25	6	2½
Ludington	Ludington Business College	......	1	7	18	3	27	10	45	16	15	6½	2
Manistee	Manistee Business College	......	1	8	30	9	26	17	56	15	12	6½	3
Marquette	Marquette Business College	1	1	12	36	15	30	27	66	20	18	5	2
Monroe	Monroe Business University	2	3	8	38	43	36	51	74	20	30	5½	3
Mt. Clemens	The Business Institute	1	1	19	43	3	12	22	55	29	5	6	2
Muskegon	Muskegon Commercial College	1	6	3	87	......	......	3	87	90	......	6	......
Owosso	Owosso Business College	1	1	33	41	......	......	33	41	50	......	5½	......
Port Huron	Port Huron Business College	1	2	40	75	10	30	50	105	50	30	5½	2
MINNESOTA.													
Albert Lea	Albert Lea Commercial College	2	2	32	91	20	16	52	107	65	18	6	2
Austin	University of Southern Minnesota (Commercial Department.)	4	5	65	142	......	......	65	142	206	......	10	......
Bemidji	Bemidji Business College	1	1	3	10	......	7	3	17	......	......	6	2
Brainerd	Brainerd Commercial College	1	2	27	79	28	30	55	109	50	28	6	2½
Crookston	Crookston College	4	2	88	40	2	7	90	47	52	9	6	2
Do.	Hughes Business College	1	2	6	49	......	......	6	49	20	......	7	......
Duluth	Central Business College	1	3	29	98	35	36	64	134	50	30	5½	2
Do.	Duluth Business University	2	7	53	461	39	121	92	582	200	60	5½	2
Do.	Parsons Business University	2	......	3	5	8	5	11	10	......	......	4½	2
Mankato	Mankato Business and Commercial College	9	7	670	460	......	......	670	460	600	......	5½	......
Minneapolis (5 W. Lake St.)	American Business College	4	4	126	215	25	35	150	250	125	35	6	3

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[1] School two nights per week.

ABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MINNESOTA—continued.													
Minneapolis (608 1st Ave. N.)	American Telegraph College	3	6	15	191	43	100	58	291	76	31	6½	2
Minneapolis (840 Hennepin Ave.)	Barry's Telegraph Institute	2	1	45	57	25	25	70	82	45	10	6½	2
Minneapolis (920 Nicollet Ave.)	Collegiate Business Institute	10	7	32	176	8	14	40	190	85	20	8	2
Minneapolis (923 Nicollet Ave.)	Gregg Shorthand School	......	2	......	64	......	......	......	64	24	......	6	......
Minneapolis (845 McKnight Bldg.).	Hillman Shorthand School	1	1	3	17	......	......	3	17	10	......	5	......
Minneapolis (Lake St. and Chigo Ave.).	Humboldt College	2	8	29	95	19	29	48	124	50	25	7	3
Minneapolis (225 South 5th St.)	Minneapolis Business College	4	8	231	291	139	182	370	473	195	160	6	3
Minneapolis (225 S. 5th St.)	Minnesota College	2	2	65	131	15	15	80	146	......	......	6½	2½
Minneapolis (Suite 445–453 Security Bldg.).	Munson Shorthand School	1	......	6	32	......	......	6	32	10	......	7	......
Minneapolis (911 Hennepin Ave.).	Northwestern Business College	8	2	13	79	44	166	57	245	42	64	5½	3
Ouatonna	Canfield School	1	1	20	30	5	9	25	39	43	12	6	2
Do	St. Cloud Business College	2	2	55	68	......	......	55	68	......	......	5½	......
St. Paul	Globe Business College	4	4	66	181	112	136	178	317	125	85	6½	3
Do	Lancaster Business Institute	1	6	82	153	55	85	137	238	85	60	5½	2
Do	Pioneer Business School	1	4	16	124	27	103	43	227	60	35	5½	3
Do	Rasmussen Practical Business School	2	4	61	300	119	300	180	600	160	125	6	2
Stillwater	do	1	1	30	35	12	19	42	54	30	12	5	2
Willmar	Willmar Seminary	4	2	43	67	8	15	51	82	75	23	6½	2½
Winona	Winona Business College	3	4	39	116	23	30	02	146	150	40	6	2
MISSISSIPPI.													
Hattiesburg	Hattiesburg Business College	2	1	15	45	......	......	15	45	25	......	8	......
Jackson	Draughon's Practical Business College	3	3	90	310	15	10	105	320	......	......	6½	......
MISSOURI.													
Booneville	Dunkle's Business School	1	1	50	10	10	10	60	20	50	15	7	2
Cape Girardeau	Cape Girardeau Business College	2	4	52	172	47	42	99	214	72	23	7	3
Carthage	Business School	......	1	8	35	2	11	5	46	12	3	8	2

Do.	Rude's Business College	1	3	32	127	15	31	47	158	75	20	9	2½
Chillicothe	Chillicothe Business College	10	15	074	1,068	......	......	674	1,068	800	......	9½	......
Do.	Jackson University of Business	1	3	85	41	5	4	40	45	48	15	8	2
De Soto	De Soto Business College	1	2	8	51	2	4	10	55	38	6	6½	2
Farmington	Ozark Business College	2	2	87	70	......	......	37	70	75	......	6	......
Kansas City	Huff's School of Expert Business Training	......	15	55	611	103	443	158	1,054	180	150	7½	3
Do.	Kansas City Business College	2	5	72	411	52	182	124	593	110	40	5½	2½
Do.	Kansas City School of Accountancy, Law, and Finance.	8	......	......	......	150	• 15	150	15	......	100	......	2
Do.	Powell's Shorthand School	1	......	1	11	1	3	2	14	6	4	6	3
Do	Spalding's Commercial College	4	6	704	......	300	......	1,004	......	400	175	5½	2
Moberly	Moberly Commercial College	1	2	22	63	10	16	32	79	40	12	6½	2
Nevada	Nevada Business College	1	3	15	75	5	5	20	80	60	20	6	2
Do.	St. Joseph Business University	2	4	75	225	60	75	135	300	150	5½	2	
St. Joseph	St. Joseph Commercial College	8	......	155	......	......	......	155	......	160	......	8½	......
St. Louis (911 Locust St.)	Barnes Business College	......	4	44	131	25	50	69	181	55	15	6	2
St. Louis (Easton Ave.)	Brown's Business College	1	1	32	133	38	101	70	284	65	35	6¾	3
St. Louis (Delmar and Vandeventer).	....do	1	3	65	240	48	91	113	331	65	30	8	3
St. Louis (8th and Pine)	Brown's Business College	2	2	80	101	86	91	166	92	70	60	7	3
St. Louis (NW. corner 8th and Locust Sts.).	Jones Commercial College	4	5	140	160	85	65	175	225	125	80	6	2
St. Louis (312 Delmar Bldg.)	Sanguinet Shorthand School	1	1	......	61	......	32	......	93	25	15	5½	2
St. Louis (406 Market St.)	Southwestern Railroad Telegraph School	1	1	5	15	8	32	13	47	18	35	5	2
St. Louis (610 Locust St.)	Union Electric Telegraph School	3	4	40	70	35	55	75	125	.75	60	7	4
Springfield	Draughon's Practical Business College	8	5	170	349	24	72	194	421	300	100	7	2
Do.	Springfield Business College	6	8	480	720	......	......	480	720	500	......	7½	......
West Plains	West Plains Business College	......	1	10	57	6	4	16	61	30	10	6	2
MONTANA.													
Billings	Billings Business College	2	2	50	170	28	55	78	225	52	18	6	2
Bozeman	Bozeman Business College	......	2	9	39	4	18	13	57	30	10	6	2
Great Falls	Great Falls Commercial College	3	2	102	298	38	117	140	416	80	35	5½	3
Helena	Helena Business College	2	3	11	314	39	61	50	375	55	23	5½	2
Lewiston	Fergus Business College	1	1	2	45	6	21	8	66	16	12	6	2
Missoula	Missoula Business and Normal College	2	2	27	108	24	34	51	142	49	18	6	2
NEBRASKA.													
Bethany	Cotner Commercial College	2	......	10	5	......	......	10	5	10	......	8	......
Fairbury	Northwestern Business College	......	2	9	39	......	......	9	39	30	......	6	......
Fremont	Fremont College	2	1	107	421	10	40	117	461	......	......	1	1
Hastings	Hastings Business College	2	2	79	95	......	......	79	95	71	......	5½	......
Lincoln	Lincoln Business College	3	6	168	602	......	......	168	602	350	......	6	......
Do.	Nebraska School of Business	4	5	84	346	......	......	84	346	225	......	6	......
McCook	McCook Business College	1	1	2	18	......	8	2	26	......	......	......	......
Norfolk	Norfolk Business College	1	3	11	122	......	69	11	191	58	10	5½	2
Omaha	Boyles Commercial College	8	9	245	617	195	321	440	938	279	104	6	2
Do.	Van Sant School of Business	1	13	......	398	6	101	6	499	270	65	4½	[1] 3
St. Paul	St. Paul Normal and Business College	2	3	26	125	6	11	32	136	90	15	8	2
York	York College School of Commerce	3	3	120	161	......	20	120	181	160	18	6½	2

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[1] School, two nights each week.

Table 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CONNECTICUT.													
Bridgeport	Bridgeport Business College	4	....	9	77	29	48	38	125	48	37	5	2½
Do	New Gutchess College and Secretarial School	2	5	14	62	32	138	46	200	50	75	4½	3
Danbury	Danbury Shorthand School	....	1	....	18	....	....	....	18	10	....	4	....
Derby	Derby Business College	1	4	7	23	19	37	26	60	25	50	5	2
Hartford	Connecticut Business College	2	6	17	43	20	73	37	116	38	41	5	2
Do	Huntsinger Business School	3	8	25	175	37	177	62	352	150	125	5	2
Do	Merchant's and Banker's Business College	2	2	20	30	20	40	40	70	40	60	5	2
Do	Modern Business School	1	5	6	41	4	26	10	67	44	24	5	2
Do	Morse Business College	7	7	88	126	82	106	170	232	200	100	6	2
Do	Winslow's Select Shorthand School	1	1	2	38	2	39	4	77	15	10	5	2
Meriden	Pequod Business School	1	5	3	72	28	85	31	157	45	164	5¼	2
Middletown	Middletown Business College	1	3	14	74	49	59	63	133	40	50	5½	2
New Britain	Hardware City Business College	1	1	5	12	12	18	17	30	12	24	5	2
Do	Smith Business School	1	3	2	30	20	76	22	106	28	90	5	2
New Haven	Connecticut Business University and School of Tutoring.	3	....	12	39	19	35	31	74	32	41	6	2½
Do	Royal Business College	1	1	10	32	25	100	35	132	35	50	4	2
Do	Stebbing Commercial School	2	4	6	105	26	124	32	229	34	42	4, 6	2
Do	Stone Business College	3	5	70	206	48	115	118	321	101	90	6	3
New London	New London Business College	3	2	12	142	2	99	14	241	101	55	5½	3
Norwich	Norwich Commercial School	1	4	10	59	28	50	38	109	60	50	5	2
South Norwalk	Merrill Business College	1	2	15	68	84	75	99	143	....	....	6	2
Stamford	Lee's Commercial College	2	2	2	31	10	52	12	83	14	30	5	2
Waterbury	Booth and Bayliss Commercial School	1	3	....	28	14	27	14	55	25	45	5	2½
Do	Waterbury Business College	3	9	31	206	117	301	148	507	135	200	4¾	2¾
DELAWARE.													
Wilmington	Beacon Business Colleges	9	10	111	333	264	242	375	575	200	250	5½	2
Do	Goldey College	6	5	200	320	445	130	645	450	200	225	5½	2

NEW MEXICO.													
Albuquerque	Albuquerque Business College	1	2	47	131	20	32	67	163	60	12	6	2
Roswell	Standard Business School		3	17	89	7	14	24	103	20	6	6	2
NEW YORK.													
Albany	Albany Business College	10	14	379	648	71	132	450	780	450	125	6	2
Do	Comfort School of Stenography		1		30	5	10	5	40	30	15	3½	2
Amsterdam	Reynolds's Business School	2	4	33	31	45	39	78	70			5½	3
Auburn	Auburn Business School	1	3	21	61	12	18	33	79	40	15	5	2
Do	Williams School		1		15	1	19	1	34	12	18	3	3
Batavia	Blount's Business School		3	2	50			2	50	48		6	
Binghamton	Binghamton School of Business	1	4	17	119	32	34	49	153	65	30	5	2
Do	Lowell School of Business	1	5	42	203	32	90	74	293	71	31	6	2
Brooklyn (2 Sumner Ave.)	Alpha School of Business	3	7	50	250	100	150	150	400	200	200	5	2
Brooklyn (1317 Broadway)	Avon School of Secretaries	1	4	3	17	8	103	11	120	8	30	5	2
Brooklyn (65 Flatbush Ave.)	Browne's Business College	8	14	173	816	671	726	844	1,542	400	450	5	2
Brooklyn (140 Fort Green Place).	Curtis Business School	2	1	1	27	18	22	19	49	11	13	5	2½
Brooklyn (895 Flatbush Ave.)	Ellsworth School of Secretaries	5	2	15	110	40	160	55	270	65	70	4½	2
Brooklyn (1297–1307 Fulton St.)	Euclid School	3	15	150	450	150	450	300	900	250	250	4½	2
Brooklyn (2582 Atlantic Ave.)	Excelsior Business School	2	3	50	100	75	75	125	175	150	150	5	2
Brooklyn (Manhattan and Greenpoint Aves.).	Heffley Greenpoint School		5	33	133	65	267	98	400	153	282	4½	2
Brooklyn (243–245 Ryerson St.)	Heffley Institute	5	35	250	1,157	300	461	550	1,618	600	400	5	2
Brooklyn (319 Ninth St.)	Lamb's Business Training School		6	6	144	107	186	113	330	70	90	5	2½
Brooklyn (143–149 South Eighth St.).	Long Island Business School	4	6	38	208	107	185	145	393	100	125	5	2
Brooklyn (720 Hancock St.)	Miner's Business Academy	2	6	21	164	65	194	86	358	60	80	5	2
Brooklyn (1800 E. New York Ave.).	Mockridge Business School	3	2	30	130	74	145	104	275	80	109	5	2
Brooklyn (1731 Pitkin Ave.)	People's Business School	3	6	10	190	40	360	50	550	175	350	4½	3½
Brooklyn (Orange and Hicks Sts.).	Plymouth Institute of Accountancy	4				42	5	42	5		47		2
Brooklyn (287–291 Broadway)	Wood's Business School	2	12	75	425	219	250	294	675	300	250	5	2
Buffalo (327 Washington St.)	Chown School of Business	1	6	25	175	34	132	59	307	75	50	5	2
Buffalo (15 W. Swan St.)	M. A. Burns School of Shorthand		2	9	49	2	25	11	74	24	14	6	3
Cortland	Cortland Business Institute	1	2	19	70			19	70	38		6	
Elmira	Meeker's Business Institute	2	6	75	261			75	261			5½	
Gloversville	Gloversville Business School	2	2	28	70	23	30	51	100	55	38	5¼	2½
Hempstead	Hempstead Business School	2	2	2	54	8	32	10	86	25	15	5½	2¼
Jamestown	Jamestown Business College	4	3	77	224			77	224	110		5½	
Kingston	Moran Business School	3	2	58	40	31	30	89	70	42	22	6	2
Do	Spencer's Business School	2	3	56	118	42	37	98	155	100	40	5½	2
Lockport	Bettinger Business Institute	1	2	15	30	10	20	25	50	40	25	5	2
Do	Lockport Business Institute	1	2	20	40	15	25	35	65	56	35	5	2
Middletown	Middletown School of Commerce	1	1	12	8	15	25	27	33	15	12	6	2
Do	Ramsdell School	1	3	14	67			14	67	40		5	2½
Mount Vernon	Sherman's Business School	2	3	26	153	36	82	62	235	68	47	5	
Newark	Elms Commercial School	1	1	8	30	8	18	16	48	20	12	5¼	2
New Brighton	Brandon-Stevens Institute	1	3	30	112	21	49	51	161	70	25	5½	2

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
NEW YORK—continued.													
Newburgh	Spencerian Business School	2	2	81	126	61	100	142	226	115	81	5	2
New Rochelle	Westchester Commercial School	1	5	15	119	69	97	84	216	70	80	5	2
New York (413 E. 138th St.)	Accountants and Secretaries Business School	1	1	4	24	4	32	8	56	20	20	4½	2
New York (501 W. 145th St.)	Audubon Commercial School		3		80	25	25	25	105	40	30	5	2
New York (391 E. 149th St.)	Bird's Business Institute	4	21	50	550	240	560	290	1,110	250	325	5	2
New York (502 Tremont Ave.)	Bronx Business Institute	3	4	12	156	86	142	98	298	84	133	5	2
New York (830 Westchester Ave.).	Bronx Commercial School	3	4	35	246	93	171	128	417	68	118	5	2
New York (37 W. 39th St.)	Miss Conklin's Secretarial School		8		225				225	85		4	
New York (Lenox Ave. and 123d St.).	Eastman-Gaines School	7	10	200	500	225	275	425	775	400	350	5	2
New York (11 W. 34th St.)	Gaffey's Business School	1	3	239		200		439				4	2
New York (280 Madison Ave.)	Institute of Commerce	3		40	51	49	71	89	122	25	40	5	4
New York (2105 Seventh Ave.)	Kell's School	2	3		90		35		125	70	30	5	2
New York (116 W. 14th St.)	Kimball Business School	3	5	33	151	94	146	127	297	103	95	5	2
New York (37 East 58th St.)	Merchants' and Bankers' Business School	6	18	300	602	400	521	700	1,123	300	300	5	2
New York (3219 Third Ave.)	Metropolitan School of Business	1	1	17	31	25	61	42	92	17	28	5	2
New York (131 East 23d St.)	Miller School	3	11	71	710	285	713	356	1,423	300	300	4½	2
New York (587 West 181st St.)	Moon's Business School		3	14	88	21	36	35	124	25	20	5	2
New York (50 East 42d St.)	Moon's Shorthand and Secretarial Schools			40	160	30	130	70	290	35	25	5	2
New York (Broadway and 66th St.).	Mull's School	1	1	22	90	46	70	68	160	26	30	5	2
New York (447 Lenox Ave.)	New York Academy	2	1	3	10	22	40	25	50	10	25	3	2½
New York (1167 Madison Ave.)	New York Commercial School	1	6	8	158	50	199	58	357	70	90	5	2
New York (1135 Broadway)	New York School of Accounts	2		1		39	2	40	2	1	8		4
New York (33 West 42d St.)	New York School of Secretaries	1	5	3	140	6	11	9	151	75	8	4	3
New York (253 Lexington Avenue).	Packard Commercial School	10	12	263	781	221	323	484	1,104	450	275	6	2
New York (1931 Broadway)	Paine Upton Business School	2	4	79	145	125	156	204	301	65	80	5	2½
New York (32 Broadway)	Post Graduate School of Accountancy	2				45	2	45	2		47		3
New York (2d Ave. and 8th St.)	Shulman School	9	5	78	119	103	175	181	294	110	225	4	3
New York (453 Tremont Ave.)	Tremont Business School	4	3	200	200	200	60	400	250	125	130	5	2

New York (542 5th Ave.)	United States School of Secretaries	5	4	4	121	3	27	7	148	50	20	5	2
New York (200 W. 72d St.)	Walworth Business Institute	3	2	25	114	37	73	62	187	55	45	5	2
Niagara Falls	Niagara Business Institute	1	3	36	62	49	58	85	120	50	53	5	2
Ogdensburg	Ogdensburg Business College	2	1	7	28	4	12	11	40	15	12	5½	2
Oswego	Chaffee's Business School		2	23	54	21	9	44	63	40	25	7	2½
Peekskill	Peekskill Business College	2	2	20	50	20	50	40	100	60	50	5	2½
Rochester	Mae J. Shannon Shorthand School		5	5	45	5	10	10	55	30	10	5½	
Do	Williams and Rogers Rochester Business Institute.	8	12	218	638	352	539	570	1,177	400	300	5½	2
Schenectady	Spencer's Business School	2	3	40	80	15	35	55	115	60	25	5½	2
Southold	Southold Academy		1	15	15			15	15	20		5½	
Stapleton	Baker Business School	2	3	3	174	8	46	11	220	60	25	5½	2
Syracuse	Central City Business School	4	16	218	725	199	350	417	1,075			6½	2
Do	Richardson Commercial School	1	1	9	16	7	9	16	25	15	20	6	2
Troy	Troy Business College	4	4	148	300	127	200	275	500	200	95	5½	2
Utica	Excelsior School of Business	1	2	17	66	16	48	33	114	50	20	5½	2
Do	Private Shorthand School	1	1		30		10		40	25	8	5	2
Yonkers	Hall's Business School	1	1	22	85	33	72	55	157			4½	2
NORTH CAROLINA.													
Asheville	Emanuel Business College	3	2	54	368			54	368			7	
Buies Creek	Buies Creek Academy (commercial department)	1		30	45			30	45	45		7½	
Charlotte	Brown's Business College	1	2	25	75			25	75	50		6½	
Do	King's Business College	3	2	65	270	14	6	79	276	125	5	5	2
Durham	Durham Business College	8	4	26	59	47	57	73	116	50	40	6½	2½
Do	National Training School	1	2	8	9			8	9	17		7	
Elizabeth City	Pool's School		1	2	6		8	2	14	6	8	4	3
Raleigh	King's Business College	3	4	170	254	23	34	193	288	254	46	7	2
NORTH DAKOTA.													
Bismarck	Bismarck Business College	2	2	87	106			87	106	120		5½	2
Fargo	Aaker's Business College	2	2	86	154			86	154	100		6½	
Grand Forks	do	4	1	80	61		3	80	64	70	3	6½	2
Do	Union Commercial College			140	100			140	100	100		5½	
Minot	Minot College of Commerce	1	1	15	60	7	18	22	78	25	10	5	2
OHIO.													
Akron	Actual Business College	4	3	57	307	140	161	197	468	165	100	6	2½
Do	Hammel Business College	4		45	89	63	57	108	146	81	48	5½	2½
Alliance	Alliance Business College	2	2	21	88	13	20	34	108	75	25	5	2
Ashtabula	Ashtabula Business College	1	2	44	61	35	43	79	104	46	29	7	2
Cambridge	Cambridge Business College	1	2	14	53	19	56	33	109	30	25	5	2
Canton	Canton Actual Business College	7	4	90	250	110	100	200	350	225	150	5	2
Cincinnati (31 East 4th St.)	Campbell Commercial School		10	45	353	53	201	98	554			6	2½
Cincinnati (404–405 Durner Bldg.).	Conroy Business School		4	2	42	6	44	8	86	30	35	5	3
Cincinnati (4th and Walnut Sts.).	Littleford School	1	8	19	260	37	126	56	386	110	65	5½	2
Cincinnati (528 Walnut St.)	Miller School of Business	1	8	131	409	179	341	310	750	350	300	5½	2½

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
OHIO—continued.													
Cincinnati (7th and Elm Sts.)	Nelson Business College	2	7	95	451	44	159	139	610	300	50	5	2
Cincinnati (60 Hollister St.)	Williams Private Shorthand School	....	....	26	61	24	35	50	96	....	....	3½	2
Cleveland (514 Erie Bldg.)	Boyd Business School	1	2	19	118	15	60	34	178	50	45	5½	2
Cleveland (Ontario and St. Clair Ave.).	Cleveland Business University	3	3	110	220	50	40	160	260	250	65	5½	2
Cleveland (2182 East 9th St.)	Dyke School of Business	2	14	48	296	80	141	128	437	200	100	6	3
Cleveland (5716 Euclid Ave.)	Lane Business School	1	4	4	126	14	66	18	192	40	40	5	2
Cleveland (942 Prospect Ave. SE.).	Ohio Business College	1	3	50	125	25	50	75	175	150	50	5½	2
Columbus	Bliss Business College	....	....	200	650	62	180	262	830	320	50	6	2
Do	Columbus Business College	4	4	53	400	....	....	53	400	250	....	6	....
Do	Mann's Business Training School	3	2	28	120	32	180	60	300	65	55	5½	2½
Do	Office Training School	6	8	100	500	75	125	175	625	250	90	5½	3
Do	Zanerian College of Penmanship	2	....	10	50	....	....	10	50	25	....	6	....
Conneaut	Conneaut Business College	....	2	6	13	7	34	13	47	6	10	5	2
Dayton	Miami Jacobs Commercial College	4	4	185	492	218	355	403	847	200	225	5½	3
Elyria	Elyria Business College	2	2	18	90	30	45	48	135	70	65	6	2
Greenfield	Greenfield Business College	2	1	28	57	7	9	35	66	44	10	5	2
Greenville	Commercial Normal College	1	2	34	5	19	9	53	14	20	15	7½	2½
Hamilton	Hamilton Business College	1	5	14	122	47	96	61	218	70	75	6	2
Ironton	Lanham Business College	....	1	4	8	1	16	5	24	12	18	5	2
Lancaster	Columbia Commercial University	1	2	23	41	14	28	37	69	50	30	7½	2½
Lima	Lima Business College	2	3	107	225	36	99	143	324	....	....	5	2
Marietta	Marietta Commercial College	1	2	5	75	5	35	10	110	75	25	5½	2
New Philadelphia	Safford's Business College	2	2	12	88	15	37	27	75	....	....	6	2½
Oberlin	Oberlin Business College	5	3	95	212	....	....	95	212	150	....	6	....
Piqua	Ideal Business School	2	1	20	92	31	54	51	146	50	35	5½	2
Sandusky	Sandusky Business College	3	1	35	107	25	58	60	165	90	38	5½	2
Scio	Scio College	1	1	9	23	....	....	9	23	20	....	5½	....
Steubenville	Steubenville Business College	3	1	32	145	52	88	84	233	98	64	6	2½
Tiffin	Tiffin Business University	3	1	27	117	8	7	35	124	94	116	6	1½

Toledo	Davis Business College	4	2	75	375	70	200	145	575	200	150	5	3
Do	Tri-State Business University	10	1	210	426	234	253	444	679	270	215	5½	2
Urbana	Moore's Business College	1	1	14	35	7	......	21	35	32	3	5½	1½
Warren	Warren Business College	1	2	4	62	4	26	8	88	......	......	5½	2
Wooster	Yocum's Wooster Business College	1	4	12	86	8	14	20	100	50	15	5	2
Youngstown	Youngstown Business College	2	4	43	148	19	84	62	232	60	40	5	2
Zanesville	Meredith Commercial School	3	4	92	110	23	57	115	167	102	51	6	2
OKLAHOMA.													
Ada	Stauffer's Business College	2	1	37	75	14	28	51	103	35	7	6	2
Anadarko	Anadarko Commercial College	1	1	9	48	......	......	9	48	25	......	5	......
Chickasha	Chickasha Business College	1	2	50	150	......	......	50	150	50	......	8½	......
El Reno	Metropolitan Commercial College	1	2	48	51	11	14	59	65	84	9	5¾	2
Enid	Enid Business College	2	4	157	101	60	32	217	133	......	......	8	2
Guthrie	Capital City Business College	1	3	340	40	10	10	350	50	100	10	8	2
Muskogee	Draughon-Lehman Business College	2	4	140	330	10	20	150	350	175	30	6	2
Okmulgee	Okmulgee Business College	2	2	52	113	39	43	91	156	68	35	6	2
Sapulpa	Beeson Commercial College	1	2	17	80	10	16	27	96	30	7	5½	2½
Tulsa	Tulsa Business College	3	5	84	373	122	174	206	547	150	90	6½	2½
OREGON.													
Astoria	Astoria Business College	2	4	19	70	38	28	57	98	60	28	5½	2
Baker	Baker Business College	1	1	21	58	11	16	32	74	......	......	5¾	2
Eugene	Eugene Business College	2	2	30	169	3	29	33	198	61	19	6	2
Portland	Behnke-Walker Business College	4	10	293	1,018	114	228	407	1,246	562	147	6	2
Do	Link's Business College	1	3	19	192	31	94	50	286	80	40	8	2
PENNSYLVANIA.													
Allentown	Allentown Business College	4	3	52	85	68	49	120	134	......	......	5	2
Do	American Commercial School	7	5	103	161	87	132	190	293	161	144	5	2
Do	Gladstone Business College	1	......	......	10	3	9	3	19	6	7	4¾	2
Altoona	Zeth School	2	4	30	115	21	49	51	164	65	35	5	2
Beaver	Duff's College	1	2	25	80	55	30	80	110	50	30	5½	2
Beaver Falls	do	2	3	28	77	49	66	77	143	70	92	5½	2
Braddock	Greer Business College	2	1	10	35	50	65	60	100	40	45	5½	2½
Brownsville	Chalfant's Business College	1	1	22	31	20	23	42	54	......	......	6	2
Butler	Butler Business College	2	2	25	110	5	15	30	125	100	12	6	2
Carbondale	Carbondale Commercial Institute	1	2	6	28	22	54	28	82	21	33	5½	2
Charleroi	Douglas Business College	2	3	48	146	12	60	60	206	148	50	5½	2
Chester	Wunderlich's Commercial School	1	......	......	......	4	9	4	9	......	12	......	1½
Danville	Russell's Business College	1	......	6	7	5	......	11	7	18	5	5	2
Dubois	Dubois Business College	1	8	31	178	13	53	44	231	125	35	5½	2
Easton	Churchman Business College	5	5	70	171	101	120	171	291	110	92	5	2
Erie	Davis Shorthand and Business School	5	3	23	127	68	122	91	249	150	150	6	2
Do	Erie Business College	2	4	41	177	68	127	109	304	110	40	5½	2½
Greensburg	Leech's Actual Business College	2	1	18	151	28	62	46	213	70	40	6	2½
Harrisburg	Beckley's Business College	2	6	60	150	50	150	110	300	100	100	5½	2
Do	Harrisburg Shorthand School	1	3	13	72	14	51	27	123	45	40	5	2
Do	School of Commerce	3	10	74	377	115	257	189	634	......	......	5½	2
Hazleton	Hazleton Business College	1	5	20	60	20	80	40	140	50	75	5	2

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
PENNSYLVANIA—continued.													
Indiana	Leech's Actual Business College	2	1	12	30	10	10	22	40	50	17	5½	2½
Johnstown	Cambria Business College	2	3	30	90	10	80	40	170	105	45	5	2½
Do.	Rowe Business College	1	3	29	86	36	37	65	123	54	26	5½	2
Kingston	Wyoming College of Business	2	3	74	120			74	120	125		6	
Lancaster	Lancaster Business College	3	2	25	90	15	90	40	180	65	60	5	2
Lansford	Panther Valley Business College	2	2	8	17	20	25	28	42	20	3	5	2
Latrobe	Leech's Actual Business College	1	2	12	38	20	61	32	99	45	70	6	2½
Lebanon	Lebanon Business College	1	1	60	55	20	15	80	70	75	25	5½	2½
Lock Haven	Lock Haven Business Institute	1		14	20			14	20	15		5½	
McKeesport	Douglas Business College	2	4	50	160	30	65	80	225	150	80	5½	2
Do.	Duff's College	2	3	25	162	17	78	42	240	150	60	5½	2
Mahanoy City	McCann's School	1	3	25	45	35	35	60	80	65	50	5	2
New Bethlehem	New Bethlehem Business School	1		8	21	2	3	10	24	20	5	5	2
New Castle	New Castle Business College	3	1	74	94	28	102	102	196	125	90	6	2½
Philadelphia (123 Chestnut St.)	American Business College	3	5	20	70	15	40	35	110	75	50	6	2
Philadelphia (3647 N. 6th St.)	Erie Night School	1	2			3	27	3	27		20		2
Philadelphia (589 E. Allegheny Ave.)	Kensington Business College	2	3	2	20	39	121	41	141	12	30	5¼	2¼
Philadelphia (16 S. 10th St.)	Palmer School	3	9	46	142	101	211	147	353	150	225	5½	2
Philadelphia (420 Pine St.)	Peirce School	30	15	355	925	619	639	974	1,564	675	675	5½	2
Philadelphia (1017 Chestnut St.)	Philadelphia Business College	13	9	99	465	338	507	437	972	400	500	5	2
Philadelphia (21 S. 12th St.)	Stein Business College	1			15	6	12	6	27	14	12	5	2
Philadelphia (801–807 Chestnut St.)	Strayer's Business College	7	17	262	776	561	696	823	1,472	431	518	6	2
Philadelphia (1002 Market St.)	Taylor Business School	3	6	50	150	50	150	100	300	100	100	4½	2
Philadelphia (1034 Arch St.)	United Telegraph School	3				40	35	40	35		30		2½
Pittsburgh (5149 Penn Ave.)	Bowers Private School	1	1			12	20	12	20		32		2½
Pittsburgh (531–535 Penn Ave.)	Boyd Business College		3	43	130	20	75	63	205	47	30	6	2
Pittsburgh (Pa. Ave. and 5th St.)	Duff's College	5	12	118	183	87	224	205	407	250	275	5½	2

Pittsburgh (5th Ave. and Grant St.).	Iron City College	3	6	30	271	56	167	86	438	162	90	5	2
Pittsburgh (Bessemer Bldg.)	Martin Shorthand School	1	7	61	305	66	264	127	569	175	140	5	2½
Pittsburgh (Highland Bldg.)	Miss Conley's School of Shorthand		3		124				124	67		5	
Pittsburgh (8 N. Ave. West)	Park Institute	5	3	56	178	116	152	172	330	125	150	5	2½
Pittsburgh (531 Wood St.)	Pittsburgh Academy	10	14	92	308	101	119	193	427	370	164	5	3½
Pottstown	Pottstown Business College	3	1	40	60	20	10	60	70	70	20	5½	2
Reading	McCann's Business College	3	2	30	50	30	40	60	90	75	60	5	2
Do	Stoner's Inter-State Commercial College	2	6	27	72	20	53	47	125	60	55	5½	2
Scranton	Commercial Institute	2	2	6	32	29	42	35	74	22	29	5½	2
Do	Scranton Lackawanna Business College	6	8	202	438	163	211	365	649	350	180	5½	2
Shenandoah	Shenandoah Business College	1	2	4	11	12	8	16	19	12	15	6	2
South Bethlehem	South Bethlehem Business College	11	1	74	178	180	144	254	322			5½	2
Sunbury	Sunbury Business College	1	1			8	30	8	30		34		3
Towanda	Towanda Business College	1		4	23			4	23	22		5	
Warren	Hoff Business College	3	3	65	175			65	175	125		5½	
Washington	Washington Business College	1	1	35	70			35	70	100		7	
Waynesboro	Waynesboro Business College	1	2	28	34	32	27	60	61			5½	2
West Chester	West Chester Business School		3	1	24	4	11	5	35	25	14	5	2
Wilkes-Barre	Wilkes-Barre Business College	4	11	50	100	100	150	150	250	90	125	5	2
Do	Wyoming Valley College of Business	3				77	96	77	96		80		2
Williamsport	Pott's Shorthand College	2		61	89	18	34	79	123	65	25	5	2
Do	Williamsport Commercial College	2	2	75	175	25	25	100	200	125	25	5½	2
York	York School of Business	2	4	35	65	38	62	73	127	52	75	6	2½
RHODE ISLAND.													
Pawtucket	Kinyon's Commercial School	4	6	21	50	101	119	122	169			5	2
Providence	Miss Brayton's Special School		3	15	59	11	48	26	107	10	4		
Do	Bryant and Stratton Commercial School	28	21	246	593	357	625	603	1,218	348	472	5	2
Do	Child's Business College	2	8	35	105	60	150	95	255	115	150	5½	2
Do	Providence School for Secretaries	3	4		100				100	75		5	
Do	Sweeney School of Shorthand and Typewriting	1	5	9	25	41	69	50	94	30	107	5	2
Woonsocket	Woonsocket Commercial School	3	6	49	129	85	95	134	224	100	119	5½	3
SOUTH CAROLINA.													
Anderson	Cecil's Business School	1	3	11	60			11	60	20		7	
Columbia	Bowen-Macfeat Business College	2	2	60	240	10	10	70	250	100	20	6	2
Newberry	Newberry Business School		1		16				16	12		5	
Spartanburg	Cecil's Business College	1	2	40	102	4	5	44	107	65	8	6	2
SOUTH DAKOTA.													
Aberdeen	Aberdeen Business College	1	5	110	155	40	30	150	185	155	25	6	2
Mitchell	Dakota Wesleyan Commercial School	2	2	7	35	13	40	20	75	34	37	6	2
Rapid City	Rapid City Business College	1	2	28	42			28	42	24		5	
Sioux Falls	Mrs. Muller's Business School		2	7	128			7	128	35		5½	
Watertown	South Dakota School of Business	2	3	25	150	10	40	35	190	100	30	6	2

Location.	Institution.	Teachers.		In day courses.		In night courses only.		Total.		Average daily attendance.		Hours per day.	
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MINNESOTA—continued.													
Minneapolis (608 1st Ave. N.)	American Telegraph College	3	6	15	191	43	100	58	291	76	31	6½	2
Minneapolis (840 Hennepin Ave.)	Barry's Telegraph Institute	2	1	45	57	25	25	70	82	45	10	6½	2
Minneapolis (920 Nicollet Ave.)	Collegiate Business Institute	10	7	32	176	8	14	40	190	85	20	8	2
Minneapolis (923 Nicollet Ave.)	Gregg Shorthand School	......	2	......	64	......	......	......	64	24	......	6	......
Minneapolis (845 McKnight Bldg.).	Hillman Shorthand School	1	1	3	17	......	......	3	17	10	......	5	......
Minneapolis (Lake St. and Chigo Ave.).	Humboldt College	2	3	29	95	19	29	48	124	50	25	7	3
Minneapolis (225 South 5th St.)	Minneapolis Business College	4	8	231	291	139	182	370	473	195	160	6	3
Minneapolis (225 S. 5th St.)	Minnesota College	2	2	65	131	15	15	80	146	......	......	6½	2½
Minneapolis (Suite 445–453 Security Bldg.).	Munson Shorthand School	1	......	6	32	......	......	6	32	10	......	7	......
Minneapolis (911 Hennepin Ave.).	Northwestern Business College	3	2	13	79	44	166	57	245	42	64	5½	3
Owatonna	Canfield School	1	1	20	30	5	9	25	39	43	12	6	2
Do	St. Cloud Business College	2	2	55	68	......	......	55	68	......	......	5½	......
St. Paul	Globe Business College	4	4	66	181	112	136	178	317	125	85	6½	3
Do	Lancaster Business Institute	1	6	82	153	55	85	137	238	85	60	5½	2
Do	Pioneer Business School	1	4	16	124	27	103	43	227	60	85	5½	3
Do	Rasmussen Practical Business School	2	4	61	300	119	300	180	600	160	125	6	2
Stillwater	....do	1	1	30	35	12	19	42	54	30	12	5	2
Willmar	Willmar Seminary	4	2	43	67	8	15	51	82	75	23	6½	2½
Winona	Winona Business College	3	4	39	116	23	30	62	146	150	40	6	2
MISSISSIPPI.													
Hattiesburg	Hattiesburg Business College	2	1	15	45	......	......	15	45	25	......	8	......
Jackson	Draughon's Practical Business College	3	3	90	310	15	10	105	320	......	......	6½	......
MISSOURI.													
Boonville	Dunkle's Business School	1	1	50	10	10	10	60	20	50	15	7	2
Cape Girardeau	Cape Girardeau Business College	2	4	52	172	47	42	99	214	72	23	7	3
Carthage	Business School	......	1	3	35	2	11	5	46	12	3	8	2

San Antonio	Draughon's Practical Business College	5	7	350	450	50	50	400	500	350	40	6	2
Do	San Antonio Business University	1	3	55	88	24	28	79	116	60	20	6½	3
San Marcus	Lone Star Business College	1	1	32	29			32	29	36		7	
Texarkana	Texarkana Business College	1	3	128	122	12	8	140	130	90	20	6½	2½
Tyler	Tyler Commercial College	15	13	1,170	1,038			1,170	1,038	968		8	
Vernon	Halcomb Training School	2	3	50	75			50	75			6	
Waco	Hill's Business College	3	2	125	275	25	25	150	300	200	30	6½	2½
Do	Toby's Practical Business College	7	3	208	330	86	11	294	341	350	50	7½	2½
Weatherford	Weatherford College Business School	5	1	10	40			10	40	38		6	
Wichita Falls	National Business College	1	1	35	185	20	35	55	220	57	12	6	2
Yoakum	Baldwin's Business College	1	3	43	78	2	5	45	83	50	4	7½	2½
UTAH.													
Ogden	Smithsonian Business College	2	4	38	173	127	157	165	330	66	45	6	2
Salt Lake City	Jos. W. N. Wille Shorthand Classes	1				3	3	3	3		6		2
Do	Utah Business College	1	3	17	107	30	67	47	174	45	30	5½	2
VERMONT.													
Brattleboro	Clawson-Hamilton Commercial College	1	1	13	35	20	59	33	94	17	21	5	2
Burlington	Burlington Business College	1	3	23	84	21	42	44	126	60	20	5	2
Rutland	Rutland Business College	1	4	51	113	40	56	91	160	76	42	5	2½
VIRGINIA.													
Lynchburg	Piedmont Business College	1	1	84	113			84	113	75		6½	
Do	Virginia Commercial and Shorthand College	1	3	25	100			25	100	80		5½	
Newport News	International Business College	2	3	41	89	55	67	96	156	75	60	7	2
Norfolk	Davis-Wagner Business College	2	3	35	300	30	75	65	375	110	30	5	2
Petersburg	Bowman Commercial College	2	3	19	113	24	16	43	129	106	20	6	3
Richmond	Smithdeal Business College	4	9	98	320	44	57	142	377	148	37	5½	2
Roanoke	Roanoke National usiness College	4	7	173	486			173	486	264		5½	
Staunton	Dunsmore Business College	3	2	73	58			73	58	110		6	
Do	Templeton Business School	1	3	16	77			16	77	60		6	
WASHINGTON.													
Aberdeen	Gray's Harbor Business College	2	2	18	160	60	40	78	200	48	25	5½	2
Bellingham	Wilson's Business College	1	1	20	128	13	36	33	164	76	18	6	2
Centralia	Centralia Business College	1	1	5	82	6	39	11	121	35	16	5	2
Seattle	Hyatt-Fowell's School of Commerce	1	2	14	202	26	69	40	271	56	27	5	2
Seattle	Northwestern Shorthand Reporting School	3	3	6	311	23	128	29	439	90	48	6	2
Do	Progressive Shorthand School		1	1	63	2	5	3	68			6	2
Do	Success Shorthand School	1	7	12	339	14	235	26	574	150	75	6	2
Do	Western Institute of Accountancy, Commerce, and Finance.	4				100	40	100	40		100		4
Do	Wilson's Modern Business College	5	7	245	734	185	370	430	1,104	250	50	6	2½
Spokane	Counselman's School of Stenography		4		154		4		158	58	4	6½	2
Do	Northwestern Business College	4	6	124	489			124	489	204		5½	
Do	Spokane Expert School of Business	3	8	91	580	51	73	142	653	165	40	5½	2
Do	Western Institute of Accountancy	1				37	28	37	28		40		2

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917-18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
WASHINGTON—continued.													
Tacoma	Beutel Business College	1	4	80	200	20	30	100	230	140	18	5	2
Do	State Business College	3	3	70	79	18	33	88	112	100	26	5½	2
Walla Walla	Walla Walla Business College	2	2	21	104	30	59	51	163	54	25	6	2
Wenatchee	Wenatchee Business College	......	4	20	118	12	14	32	132	45	10	5½	2
WEST VIRGINIA.													
Bluefield	Bluefield Normal and Business College	1	......	7	24	5	4	12	28	15	6	7	3
Do	Summit City Business College	1	2	15	140	12	28	27	168	65	12	6	2
Charleston	Capital City Commercial College	1	2	67	292	57	114	124	406	175	75	6	2
Clarksburg	West Virginia Business College	1	3	40	150	20	50	60	200	175	75	5½	2
Huntington	Boothe Business School	1	4	50	250	35	45	85	295	90	35	6½	2
Martinsburg	Martinsburg Business College	1	4	15	39	46	24	61	63	45	40	6	2
Wheeling	Elliott Commercial School	4	3	93	330	66	124	159	454	184	110	5½	2
WISCONSIN.													
Appleton	Actual Business College	2	1	20	59	4	11	24	70	48	12	5½	2
Do	Appleton Business College	2	3	75	256	......	......	75	255	140	......	5½	......
Ashland	Gordon's Business College	1	1	12	56	6	12	18	68	40	10	6	2
Baraboo	Baraboo Business College	1	2	9	77	3	38	12	115	30	15	6	2
Eau Claire	Hunt's Business College	2	1	42	149	8	14	50	163	80	10	6	2
Green Bay	Badger Commercial College and Telegraph School	3	1	25	41	4	20	29	61	50	20	6	2
Do	Green Bay Business College	1	4	17	139	......	......	17	139	80	......	5	......
Janesville	Janesville Business College	1	3	9	114	6	15	15	129	69	15	6	3
La Crosse	Wisconsin Business University	2	4	170	112	......	......	170	112	300	......	5½	......
Madison	Capital City Commercial College	5	2	109	205	......	......	109	205	200	......	5½	......
Do	Success Shorthand School	......	4	6	73	......	......	6	73	40	......	7½	......
Manitowoc	Manitowoc Business College	1	2	38	63	15	20	53	83	50	25	6½	2
Marinette	Twin City Commercial School	1	1	18	83	19	58	37	141	50	20	6	2½
Merrill	Merrill Commercial College	2	1	25	30	......	......	25	30	45	......	6	......

Milwaukee (223 Third St.)	Hoffman Metropolitan Business College	2	1	27	95	16	34	43	129	90	35	5	2½
Milwaukee (13 Cary Bldg.)	Miss Brown's School of Business	......	6	5	352	......	......	5	352	......	......	5½	......
Milwaukee (85 Oneida St.)	Miss Kelly's School of Stenography	......	2	......	52	......	13	......	65	25	10	5½	2
Milwaukee (421–422 University Bldg.).	Railway and Commercial Telegraph Institute	2	1	6	11	5	10	11	21	15	10	7	2½
Milwaukee (n.e.cor. Wisconsin and Broadway Sts.).	Spencerian Business College	3	5	67	311	72	114	139	425	125	55	5½	2½
Milwaukee (69 Wisconsin and E. Water St.).	Wisconsin School of Accountancy and Stenography.	1	......	12	13	20	......	32	13	20	15	5	2
Oshkosh	Oshkosh Business College	2	4	60	130	33	77	93	207	......	......	6½	2
Racine	Wisconsin Business College	2	3	49	122	61	56	110	178	......	......	5½	2
Rice Lake	Potter Business College	1	......	9	25	7	16	16	41	20	17	5½	2
Waukesha	Steiner Business College	1	......	5	14	7	9	12	23	8	14	6	2
Wausau	Wausau Business College	2	3	85	111	......	......	85	111	78	......	6½	......
WYOMING.													
Cheyenne	Cheyenne Business College	......	2	10	70	20	20	30	90	40	15	5½	2
Sheridan	Spencer Business College	1	1	35	75	15	25	50	100	60	25	5½	2

TABLE 19.—*Teachers, students, and attendance in Y. M. C. A. and denominational business schools reporting in 1917–18.*

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ALABAMA.													
Birmingham	Y. M. C. A. Night School (commercial department).	2	......	......	......	37	......	37	......	......	29	......	3
Mobile	McGill Institute	1	......	17	......	31	......	48	......	16	24	3½	2
CALIFORNIA.													
Los Angeles	Y. M. C. A. of Commerce and Finance	5	......	364	......	145	......	509	......	45	30	5	2
San Francisco	Y. M. C. A. School(commercial department)	8	......	40	......	200	......	240	......	20	60	6	2

TABLE 19.—*Teachers, students, and attendance in Y. M. C. A. and denominational business schools reporting in 1917-18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school
1	2	3	4	5	6	7	8	9	10	11	12	13	14
COLORADO.													
Denver	Y. M. C. A. Business School	5		30		60		90		14	10	6	2
CONNECTICUT.													
Bridgeport	Y. M. C. A. (commercial department)	2				66	30	66	30		40		2
Hartford	Hillyer Institute Y. M. C. A. (commercial department).	6				160		160			50		2
DELAWARE.													
Wilmington	Y. M. C. A. Evening School (commercial department).	7				53		53			22		2
DISTRICT OF COLUMBIA.													
Washington (1736 G St., NW)	Washington Commercial School (Y. M. C. A.)	6				330		330					
Do	Washington School of Accountancy, Y. M. C. A.	9		200	18	230		430	18			2	2
GEORGIA.													
Augusta	St. Patrick's Commercial Institute	5		160				160		140		4½	
ILLINOIS.													
Belleville	Cathedral Commercial High School	1		29				29		29		6	
Chicago (19 S. La Salle St.)	Central Y. M. C. A. Institute (commercial department).	13		168		453		621		78	75	½	1
Chicago (1456 Oakdale Ave.)	St. Alphonsus School (commercial department)		4	27	55			27	55	82		5	
Chicago	St. Andrew's School		12		43				43	43		5	
Chicago (2954 Archer Ave.)	St. Bridget's Commercial School		1		43				43	35		6	
Chicago (521 N. Paulina St.)	St. Columbkille High School		2		36				36	36		5	
Chicago (1633 Cleveland Ave.)	St. Michael's High School	2	2	43	53			43	53				
Chicago (Canal St.)	St. Patrick's Commercial Academy	15		497				497					
Chicago (3210 Athington St.)	Sears-Roebuck Y. M. C. A. Schools (commercial department).	2				43		43			26		3
Chicago (1621 Division St.)	Y. M. C. A. Commercial School	2				26		26					3

INDIANA.													
Fort Wayne	St. Peter's School	......	2	18	19	......	......	18	19	37	......	5	......
Indianapolis	Y. M. C. A. Schools (commercial department)	......	......	......	......	184	......	184	......	......	112	......	2
Richmond	St. Mary School	......	2	......	15	......	......	......	15	14	......	5½	......
South Bend	Y. M. C. A. Night School (commercial department).	2	......	......	......	30	......	30	......	......	25	......	1½
KENTUCKY.													
Ashland	Holy Family Business School	......	2	8	45	......	......	8	45	45	......	6	......
Bellevue	Sacred Heart School	......	1	5	20	......	......	5	20	26	......	6½	......
Covington	St. Joseph High School	1	......	33	......	......	......	33	......	32	......	5	......
Louisville	St. Helena's Commercial College	......	3	8	144	......	17	8	161	45	10	7½	2
Do	Y. M. C. A. Schools (commercial department)	38	4	......	33	766	288	766	321	26	158	2	2
MARYLAND.													
Baltimore (Franklin and Cathedral Sts.).	Association Institute (commercial department)	45	......	48	85	941	78	989	163	52	128	5	2
Do	Radio School, Y. M. C. A	2	......	20	15	20	5	40	20	50	16	4	2
Baltimore (727 N. Washington St.).	St. Andrew's Commercial School	......	1	5	15	......	......	5	15	20	......	4½	......
Gardenville	St. Gertrude's Commercial School	......	2	9	14	......	......	9	14	20	......	4½	......
MASSACHUSETTS.													
Boston (Sunnyside St., Roxbury).	Cheverus Commercial School	......	4	8	127	......	......	8	127	135	......	5	......
Boston (316 Huntington Ave.).	Huntington School for Boys (commercial department).	2	......	45	......	......	......	45	......	40	......	5	3
Do	Northeastern College (School of Commerce and Finance).	33	......	......	......	477	......	477	......	......	381	......	2
Do	Northeastern Preparatory School (commercial department).	2	......	......	......	338	......	338	......	......	......	......	3
Boston (Berkeley St.)	Y. W. C. A. Commercial School	......	2	......	110	......	70	......	180	60	45	5	3
Fall River	St. Ann's Commercial School	3	......	28	......	......	......	28	......	26	......	5½	......
Lowell	St. Patrick's Boys School	2	......	43	......	......	......	43	......	......	......	......	......
Melrose	St. Mary's School	......	2	......	22	......	......	......	22	19	......	4	......
Springfield	Y. M. C. A. (commercial department)	7	......	......	......	113	......	113	......	......	......	......	2
Watertown	St. Patrick's Commercial High School	......	3	18	65	......	......	18	65	76	......	5	......
Worcester	Northeastern College School of Commerce and Finance, Y. M. C. A.	11	1	......	......	191	......	191	......	......	147	......	2½
MICHIGAN.													
Detroit (Adams and Witherell Sts.).	Detroit Institute of Technology (commercial department).	15	......	27	......	682	......	709	......	......	......	6½	2
Detroit (61-65 Jay St.)	St. Joseph's Commercial School	5	......	122	......	......	......	122	......	110	......	5	......
Grand Rapids	War Industrial Training Institute	2	......	......	......	50	......	50	......	......	29	......	2
Hancock	Suomi College	2	3	15	45	......	......	15	45	59	......	6½	......

TABLE 19.—*Teachers, students, and attendance in Y. M. C. A. and denominational business schools reporting in 1917-18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MINNESOTA.													
Duluth	Y. M. C. A. Schools (commercial department)	1				23		23			16		2
Minneapolis (44 South 10th St.)	Central Branch Y. M. C. A. (commercial department).	3		35		162		197		20	60	6	2
St. Paul	Y. M. C. A. Night School (commercial department).	6				124		124			40		2
MISSOURI.													
St. Joseph	Y. M. C. A. Schools (commercial department)	1				5		5			5		1
St. Louis (Grand and Franklin Aves.).	Ralph Sellew Institute			6		200		206		5		5½	
St. Louis (1411 Locust St.)	Y. W. C. A. (commercial department)		3		101		112		213			5	2
Washington	St. Francis Borgia Commercial School		1	4	6			4	6	10		7½	
NEBRASKA.													
Omaha	Y. M. C. A. Night School (commercial department).	3				100		100			42		2
NEW JERSEY.													
Camden	Y. M. C. A. Institute (commercial department)	3				50		50			39		2½
Hoboken	School of Our Lady of Grace (commercial department).		1	14	34			14	34	48		5	
Jersey City	St. Paul's Academy (commercial department)		1		33				33	32		5	
Newark (111 Halsey St.)	Y. M. C. A. (commercial department)	12			89	441		441	89				
Newark (53 Washington St.)	Y. W. C. A. (commercial department)		3		54		23		77	50	18	3	2
NEW YORK.													
Brooklyn (1121 Bedford Ave.)	Bedford Branch, Y. M. C. A. Schools (commercial department).	7				234		234			200		2
Brooklyn (55 Hanson Place)	Marquand School, Y. M. C. A. (commercial department).	5		47		467		514		48	383	5½	2½

Brooklyn (137 Menahan St.)	St. Barbara Commercial School for Boys	1		14				14		14		14	
Brooklyn (342 Bridge St.)	St. Joseph's Commercial School		12		400				400	394		5	
Buffalo (Mohawk and Franklin).	Association Institute, Y. M. C. A. (commercial department).	42	2	119	70	882	135	1,001	205	35	400	4–7	2
New York (215 West 23d St.)	Chelsea School	46		114		592		706		90	54	6	3
New York (153 East 86th St.)	East Side Y. M. C. A. Schools (commercial department).	2				83		83			20		2
New York (5 West 125th St.)	Harlem Y. M. C. A. Evening School (commercial department).	2	1				95		95		35		2
New York (145 East 65th St.)	St. Vincent Ferrer School		4	21	104			21	104	122		5	
New York (318 West 57th St.)	West Side Y. M. C. A. (commercial department).	8				480		480					2½
NORTH CAROLINA.													
Charlotte	Y. M. C. A. Schools (commercial department)	2				16		16			8		1½
OHIO.													
Bellaire	St. John's Commercial High School		1		19				19	18		5½	
Canton	Canton Technical Institute Y. M. C. A. (commercial department).	8				194		194					2
Cincinnati (429 West 8th St.)	St. Joseph's College	5		27				27		24		6	
Cincinnati (520 Sycamore St.)	St. Xavier School (commercial department)	2	4	68	94			68	94	159		5½	
Cincinnati (Elm and Canal Sts.).	Y. M. C. A. schools	3	2	20		100		120		20	70	6	2½
Cleveland (1027 Superior Ave.)	Girls Catholic High School		5		46				46	36		6	
Cleveland (7214 Myron Ave. NE.).	St. Francis Commercial School		2	25	55			25	55	78		5½	
Cleveland (2200 Prospect Ave.)	Central Y. M. C. A. (commercial department)	4		54		126		180		45	90	6	2
Columbus	Sacred Heart School (commercial department)		2		75				75	72		5	
Dayton	Y. M. C. A. Institute	10				160	8	160	8		126		2
Fostoria	St. Wendelin School		1		17				17	17		5	
Portsmouth	Holy Redeemer School (St. John's Business College).		2	9	40			9	40	44		6	
Springfield	Y. M. C. A. schools (commercial department)	2				21		21			11		2
Toledo	Y. M. C. A. School (commercial department)	3				28	1	28	1		5		
Youngstown	Y. M. C. A. School (commercial department)	6				64		64			20		2
Zanesville	St. Nicholas High School		2	18	22			18	22				
OREGON.													
Portland	Christian Brothers Business College	6	1	136				136		106		6	
Do	Y. M. C. A. Schools (commercial department)	2		222		297		519		25	40	5½	2
PENNSYLVANIA.													
Danville	St. Joseph's School		1	6	5			6	5			5½	
Easton	St. Bernard's High School		1	8	22			8	22	26		5	
Heckscherville	St. Kyron's Parochial School		1	11	19			11	19	29		5¾	
McKeesport	St. Peter School		3	21	42			21	42	62		7	
McKees Rocks	St. Francis de Sales School	1	2	10	22			10	22	30		5½	
Oil City	St. Joseph's Academy		2	26	41			26	41	65		5¾	

TABLE 19.—*Teachers, students, and attendance in Y. M. C. A. and denominational business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
PENNSYLVANIA—continued.													
Philadelphia (41st St. and Westminster Ave.).	Pennsylvania R. R. Y. M. C. A. (commercial department).	2		25	16	14	20	39	36	37	25	2	2
Scranton	Y. M. C. A. Schools (commercial department)	1				22		22			15		2
South Bethlehem	Holy Infancy Parochial School		1	9	22			9	22	30		5	
Wilmerding	Y. M. C. A. Evening School (commercial department).	4	3	25			70	25	70	20	50	4	2
RHODE ISLAND.													
Central Falls	Sacred Heart High School	7		90				90					
TEXAS.													
Dallas	Y. M. C. A. Evening School (commercial department).	3				34		34			29		2
Fredericksburg	St. Anthony's Business College	1		12				12		12		6	
Houston	Y. M. C. A. Schools (commercial department)	3				60		60			18		
UTAH.													
Salt Lake City	Latter Day Saints Business College	8	8	150	625	204	290	354	915	310	154	7½	2
VIRGINIA.													
Portsmouth	St. Paul's Male Academy	2		17				17		17		5	
Roanoke	St. Andrew's School		2	4	14			4	14	16		5½	
WASHINGTON.													
Seattle	Y. M. C. A. School (commercial department)			113		318		431				6	2
Spokane	Jenkins Institute, Y. M. C. A	1	1	7		3		10		6	3	6	2

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18.*

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ALABAMA.																								
Massey Business College	214	98	103	711	25	10	.....	.....	$15	$60	$5	$15	$60	$5	$20	$90	.....	.....	.....	.....	6	6	9	.....
Southern Business College	.....	.....	8	32	.....	.....	.....	.....	.....	.....	.....	4	35	3	.....	.....	.....	.....	.....	.....	.....	9	.....	.....
Wheeler Business College	120	89	134	564	14	23	.....	.....	15	60	8	15	60	8	20	100	.....	.....	.....	.....	6	6	12	.....
Campbell Institute of Shorthand and Accounting	19	4	11	86	4	23	.....	.....	.....	50	.....	.....	50	.....	.....	85	.....	.....	.....	.....	4	4	6	.....
Florence Business College	.....	.....	2	4	6	30	.....	.....	.....	.....	.....	.....	30	.....	.....	60	.....	.....	.....	.....	.....	6	9	.....
Ebeltoft Private School of Shorthand and Typewriting	.....	.....	15	117	.....	.....	.....	.....	.....	.....	.....	.....	42	.....	.....	.....	.....	.....	.....	.....	.....	3–6	.....	.....
Draughon's Practical Business College	40	25	9	177	.....	.....	.....	.....	20	60	.....	20	60	.....	.....	.....	.....	.....	.....	.....	4	4	.....	.....
Massey Business College	100	65	40	260	.....	.....	.....	.....	15	60	8	15	60	8	.....	.....	.....	.....	.....	.....	4–6	4–6	.....	.....
ARIZONA.																								
Lamson Business College	37	33	44	229	10	57	.....	.....	15	[1] 80	8	15	[1] 80	8	15	[1] 80	$8	.....	.....	.....	10	10	10–15	.....
ARKANSAS.																								
James Business College, Conway	34	10	9	32	.....	3	.....	.....	10	40	5	10	40	5	10	75	5	.....	.....	.....	4–7	4–6	8–12	.....
Draughon's Practical Business College, Fort Smith	40	30	10	200	50	60	.....	.....	16	60	.....	16	60	.....	20	100	.....	.....	.....	.....	4–6	5–7	7–10	.....
Fort Smith Commercial College	6	4	2	13	1	.....	.....	.....	13	50	5	13	50	5	15	90	8	.....	.....	.....	3	3½	5	.....
Draughon's Practical Business College, Little Rock	137	160	130	389	.....	.....	.....	.....	13	75	.....	13	75	.....	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Hines Business College	20	28	10	124	4	1	.....	.....	15	60	6	15	60	6	15	100	6	.....	.....	.....	5	6	8	.....
James Business College, Pine Bluff	24	47	19	83	33	107	.....	.....	10	75	10	10	75	10	10	75	10	.....	.....	.....	4	3	7	.....
Siloam Springs Commercial College	7	.....	2	45	2	12	.....	.....	10	50	.....	10	50	.....	10	85	.....	.....	.....	.....	6	6	10	.....

[1] If course is completed in time prescribed.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting, in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
CALIFORNIA.																								
Berkeley Business College	18	66	21	50	15	184	10	18	$15	$75	$6	$15	$75	$6	$15	$100	$6	$10	$50	$10	6	6	9–10	6
Heald's Business College, Chico	27	6	6	66	12	69	.....	.....	15	[1]90	6	15	[1]90	6	15	[1]125	.....	.....	.....	.....	6–8	6–8	8–12	.....
Heald's Fresno College	95	177	35	282	10	31	.....	.....	15	[2]90	5	15	[2]90	5	15	[1]125	5	.....	.....	.....	8	8	12	.....
Glendale Commercial School	8	5	2	35	10	40	.....	.....	10	.....	5	5	.....	5	10	.....	5	.....	.....	.....	.....	.....	.....	.....
California Brownsberger Commercial College	90	140	71	349	30	60	.....	20	20	160	10	20	160	10	20	240	.....	20	160	.....	8	8	12	8
Central Business College	9	40	9	142	.....	.....	.....	.....	10	30	6	10	30	6	.....	.....	.....	.....	.....	.....	3	3	.....	.....
Coast College of Lettering	[3]13	[3]10	.....	.....	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5–8	.....	.....	.....
Hollman Business College	35	40	15	105	.....	.....	.....	.....	15	[3]80	8	15	[3]80	8	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Mackay Business College	42	384	77	709	33	357	49	438	13	55	6	13	55	6	15	68	6	15	68	6	6	6	6–8	6–8
Santa Fe Telegraph Schools	.....	.....	.....	.....	.....	.....	16	64	.....	.....	.....	.....	.....	.....	.....	.....	.....	[4]10	.....	.....	.....	.....	.....	6
School of Commerce, Accounts and Finance, Southwestern University [5]	7	3	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shorthand Institute	.....	.....	4	21	.....	.....	.....	.....	.....	.....	.....	16	.....	5	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Willis-Woodbury Business College	82	54	70	586	.....	.....	.....	.....	13	[2]80	6	13	[2]80	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Napa Business College	10	6	7	69	4	7	.....	.....	12	[6]115	5	13	[6]115	5	13	[6]115	.....	.....	.....	.....	8–9	8–9	12–14	.....
Heald's Oakland Business College	70	73	26	207	1	10	.....	.....	15	[7]75	6	15	[7]75	6	15	[7]75	6	.....	.....	.....	6–8	6–8	12–15	.....
Pott's Business College	49	118	37	212	6	104	.....	.....	15	.....	5	15	.....	5	15	.....	5	.....	.....	.....	6–8	6–8	10	.....
Pomona Business College	4	6	2	11	5	27	.....	.....	10	50	6	10	50	6	12	80	6	.....	.....	.....	6	6	.....	.....
Heald's Sacramento Business College	120	250	50	320	.....	.....	.....	.....	13	.....	6	13	.....	6	.....	.....	.....	.....	.....	.....	8	8	.....	.....
California Commercial College	37	41	17	270	6	19	.....	.....	13	[7]75	6	13	[7]75	6	13	[6]135	6	.....	.....	.....	6–8	6–8	12–14	.....
Kelsey-Jenney Commercial College	51	72	39	249	.....	.....	.....	.....	13	[6]110	6	13	[6]110	6	.....	.....	.....	.....	.....	.....	7	7	.....	.....
San Diego Business and Academic College	.....	.....	.....	.....	58	28	.....	.....	.....	.....	.....	.....	.....	.....	13	120	10	.....	.....	.....	.....	.....	12	.....
Chicago Business College	.....	.....	.....	.....	.....	150	.....	.....	.....	.....	.....	.....	.....	.....	10	100	5	.....	.....	.....	.....	.....	12	.....
Heald's San Francisco Business College	1,300	2,100	1,100	2,300	450	750	400	100	15	[7]75	6	15	.....	6	15	.....	6	15	.....	6	6–8	6–10	12–15	.....

School of Accounts	40	33									10													
Success Commercial Academy	10	23	20	97					19	[7] 95	8	19	[7] 95	8							5	8		
Heald's Business College, San Jose	67	69	30	230	16	50			18		8	18		8	15		5				8	8	15	
Orange County Business College	14	21	10	36	29	58			15	[2] 90	7	15	[2] 90	7	15	[1] 140	7				8	8	12–14	
Santa Barbara Business College	17	25	7	66		3			15		5	15		5							7–10	7–10		
Santa Rosa Business College	65	60	11	127	2	15			15	[2] 65	6	15	[2] 65	6	15						6	6	10	
COLORADO.																								
Colorado Business College	11	7	9	38	24	55			15	90	6	15	90	6	15	115	6				9	9	12	
Hart's Business College	7	6	9	50	8	10			10	35	5	10	50	5	10	75	5				4	6	6	
Brown's Business College	41	40	30	165	25	68			15	90	6	15	90	6	15	150	6				6	6	12	
Delta Business College	8			3	13	48			12	65	5	12	60	5	12	110	5				7	7		
Barnes Commercial School	130	188	120	650	75	405			15	75	5	15	75	5	15		5				6	6	9	
Central Business College	90	45	30	120	30	50			12	[7] 60	5	12	[7] 60	5	12		5				7–8	6–7	12	
Modern School of Business	48	60	44	197			30	56	15	75	5	15	75	5				15	75	5	6–7	6		6–12
Park's Business School					90	160									14		5						8–20	
Woodworth Shorthand College	16	114							15	100											12			
Hoel-Ross Business College	29	15	11	42	6	121			12		5	12		5	12		5				6–8	6–8	9	
Greeley Commercial College	27	13	8	63		4			12	60	6	12	60	6	12	110					6	6	12	
American Business College	35	36	20	210					15	75	5	15	75	5							6	6		
Colorado State College of Business	26	48	24	70	36	72				65			65			125					6	6	9	
CONNECTICUT.																								
Bridgeport Business College	25	58		26					10		5	10		5							5	9		
New Gutchess College and Secretarial School	20	25	11	155	5	27			12		6	12		6	12		6				8	8	12	
Danbury Shorthand School				18								10												
Derby Business College	19	5	5	28	2	27			12		6	12		6	12		6				6–8	6–8	10–12	
Connecticut Business College	29	23	5	84	3	7			15		5	15		5	15		5				6–8	6–8	12–15	
Huntsinger Business School	30	75	20	200		5			15		5	15		5	15						6	6		
Merchants' and Bankers' Business College	24	11	10	60	5	5			15	125	5	15	125	5	15						8	8	8–10	
Modern Business School	5	2	1	55	4	10			15		5	15		5	15		5				8–10	8–10		
Morse Business College	147	39	19	184					16		5	16		5							10	10		
Winslow's Select Shorthand School			4	77								16		5								6–12		
Pequod Business School	1	5	20	135	9	11			14	120	5	14	120	5	14	150	5				8–10	8–10	15	
Middletown Business College	53	29	6	74	4	30			12		6	12		6	12		6				6–8	6–8	8–10	
Hardware City Business College	12	7	5	23					15		5	15		5							6–10	6–10		
Smith Business School	20	28	2	76	2	30			12	120	5	12	120	5	12	120	5				10	10	10	
Connecticut Business University and School of Tutoring	18	25	11	47	2	2			12		6	12		6	12									
Royal Business College			13	87								15		6								7		
Stebbing Commercial School			32	215	8	98			15			15		6	15		6				8–9	8–9		
Stone Business College	32	142	112	268		6			15		6	15		6	15		6				10	8	12–18	
New London Business College					8	263									15		5						6–12	
Norwich Commercial School	21	13	14	41	8	47			12		6	12		6	12		6				5–10	5–10		
Merrill Business College	32	51	67	69		23			14		5	14		5	14		5				6–10			
Lee's Commercial College	5	2	7	81					10		5	10		5							8–10	8–10		
Booth and Bayliss Commercial School	12	25	2	69					15		6	18		6							4	9		
Waterbury Business College	96	120	52	356					15	[7] 120	5	15	[8] 120	5							10	10		

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[1] Tuition fee for 8 months.
[2] If course is completed in time prescribed.
[3] Show card writing.
[4] For nonresident students, going back and forth, rate of $5 per month is given.
[5] Night school.
[6] Tuition fee for 1 year.
[7] Tuition for 6 months.
[8] Tuition for 10 months.

LE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting, in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
DELAWARE.																								
Beacom Business Colleges	226	61	132	418	.....	.....	.....	.....	$16	.....	$5	$16	.....	$5	.....	.....	.....	.....	.....	.....	9	9	.....	.....
Goldey College	275	80	360	300	.....	.....	.....	.....	16	.....	6	16	.....	6	.....	.....	.....	.....	.....	.....	8–9	8–9	.....	.....
DISTRICT OF COLUMBIA.																								
Steward's Business College	63	21	375	856	12	44	.....	.....	14	.....	7	14	.....	7	$14	.....	$7	.....	.....	.....	.....	.....	.....	.....
Temple School of Shorthand and Typewriting	.....	.....	300	898	.....	.....	.....	.....	.....	.....	.....	12	.....	8	.....	.....	.....	.....	.....	.....	.....	10	.....	.....
Washington Business College	22	9	133	275	.....	.....	.....	.....	14	.....	7	14	.....	7	.....	.....	.....	.....	.....	.....	8–10	8–10	12	.....
Wood's Commercial School	20	20	219	630	.....	.....	.....	.....	12	.....	7	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
FLORIDA.																								
Beeler Business College	5	20	5	50	.....	10	.....	.....	.....	.....	8	.....	.....	8	.....	$10	.....	.....	.....	.....	.....	.....	.....	.....
Draughon's Practical Business College	21	4	46	174	5	10	.....	.....	10	$50	5	10	$50	5	20	85	.....	.....	.....	.....	4	5	9	.....
Florida Commercial Institute	5	6	2	38	5	16	.....	.....	13	54	8	13	63	8	13	99	$8	.....	.....	.....	4–6	4–6	8–10	.....
Pan-American College of Commerce	34	38	19	240	31	151	.....	.....	15	80	8	15	80	8	15	110	8	.....	.....	.....	6	6	9	.....
Southern School of Commerce	18	12	6	70	6	28	.....	.....	10	40	5	10	40	5	13	75	8	.....	.....	.....	5	4	8	.....
St. Petersburgh Business College	10	18	6	46	.....	.....	.....	.....	10	50	5	10	50	5	.....	.....	.....	.....	.....	.....	4	8	.....	.....
Southern School of Commerce	5	15	5	45	.....	.....	.....	.....	15	75	5	15	75	5	.....	.....	.....	.....	.....	.....	4	4	.....	.....
Tampa Business College	125	35	54	214	95	160	.....	.....	15	54	5	15	54	5	15	90	.....	.....	.....	.....	4–6	4–6	5–8	.....
GEORGIA.																								
Athens Business College	17	5	14	108	30	52	.....	.....	.....	50	.....	.....	50	.....	.....	95	.....	.....	.....	.....	4	8	5	.....
Atlanta Business College	30	16	13	124	5	12	.....	.....	15	55	6	15	55	6	20	90	10	.....	.....	.....	6	6	8	.....
Draughon's Business College	25	110	25	130	15	60	.....	.....	12	60	.....	12	60	.....	15	95	6	.....	.....	.....	5	5	8	.....

Simplex Shorthand School			30	170									85									3		
Southern Shorthand and Business University	78	52	72	566	70	101		13		60	6	13	60	6	13	100	10				6	6	8	
Osborne's Business College	35	35	30	40	25	25			10	35		10	45		20	70					4	6	7	
Massey Business College	19	4	25	72	18	20			15	60		15	60			90					4-6	4-6	7-9	
Georgia-Alabama Business College	35	18	92	138	58	87				70			70			120					6	6	10	
Southern School of Telegraphy							74	20											$60					4-6
South Georgia Business College	20	2	7	30	7	64				45			42			78					4	3-4	5-7	
IDAHO.																								
Gem State Business College	18	38	12	79	10	26			14	85	8	14	85	8	14	150					6	6	12	
Lewiston Business College	4	70	6	40	2	30			15			15			16	125					6-9	6-9		
Creekmur's Business College	16	18	9	56	17	8	2	5	10		5	10		5	10		5	$12		$7	9	9	9	6
Gregg Business College	10	5	5	75		10			12	150	6	12	150	6	12	200					12	12		
ILLINOIS.																								
Brown's Alton Business College	98	12	22	122	28	14			12	[1] 65	8	12	[1] 65	8	12	[1] 120	8				6	6	12	
Aurora Shorthand School	2	1	5	24					10	40	5	10	40	5							4	8		
Gregg-Aurora Business College	18	28	22	79	14	61			12	60	5	12	60	5	12	60	5				6	6	6	
Belleville Commercial College	29	11	16	64	28	14																		
Brown's Cairo Business College	30	7	40	99	2	15			13	75	5	13	75	5	13	120	5				7	7	12	
Austin Business College			10	40								10		4								6-7		
Birmingham Shorthand School			8	47					10	50	5											6		
Boyd Shorthand School			50	260									50									3		
Chicago Business College	38	25	26	87		4			12		6	12		6	12		6				8	8	12	
Columbia Business College, Irving Park	34	31	29	131	8	15			12		6	12		6	12		6				7-8	7-8	18-20	
Englewood Business College	107	224	23	428					15	[3] 140	6	15	[3] 140	6							10-12	6-8		
Gregg School			459	1,374								15	75	6								6		
Illinois Business College	23	22	16	211	7	30			13	[3] 120	6	13	[3] 120	6	13						10-12	6-8		
Mac Cormac School	100	94	51	255	5	40			12		5	12		5	12		5				8-10	6-9	12	
Metropolitan Business College [2]	622	514	376	2,397					13	[3] 100	6	[1] 13	[1] 65	6							12	6		
National Institute of Secretaries			21	69								7		(4)								5-7		
Northwestern Business College	99	110	41	303					12	[3] 115	6	12	[3] 115	6							8-12	6-8		
Orr's Business College	61	58	46	276	3	2			12		6	12		6	12						12	6½	18½	
Pierson Business College	120	220	155	322	74	42			12		6	12		6										
Select School of Shorthand and Typewriting			11	89								12		6								5-6		
Success Shorthand School			259	412								15	75	10								6		
Trook's Commercial School	25	11	40	157					10	60	5	10	60	5							6	6		
Watson's Chicago Business College	24	44	25	66	35	45			12		6	12		6	12		6				6-12	6-8	12-18	
Chicago Heights Business College	8	5	3	29	8	31			10		5	10		5	10						6	6	9	
Brown's Danville Business College	60	35	145	461	25	15			13	75	5	13	75	5	13	120	5				7	7	12	
Brown's Decatur Business College	132	66	87	347					35	[1] 123		35	123								8	8		
Lyon Business College	12	10	22	83	11	30	8	7													6½	6½	12	10
Brown's East St. Louis Business College	134	44	51	365	56	29			10	65	5	10	65	5	10	110	5				6	7	12	
Summers College of Commerce	25	25	16	105	21	92			10	60	5	10	60	5	10	90	5				6	5-6	9	
Evanston Business College					35	180									10		5						9-12	
Watson's Evanston Business College	13	15	12	110					10	70	5	10	70	5							3-12	3-12		
Orchard City College	3		18	36	8	12			[5] 12			[5] 12			[5] 12						10	10	10	

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[1] If course is completed within prescribed time.
[2] Includes central college and three branches.
[3] Tuition fee for 1 year.
[4] Tuition fee, $5 to $25 per month.
[5] Includes books and supplies.

TABLE 18.—*Teachers, students, and attendance in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
WASHINGTON—continued.													
Tacoma	Beutel Business College	1	4	80	200	20	30	100	230	140	18	5	2
Do.	State Business College	3	3	70	79	18	33	88	112	100	26	5½	2
Walla Walla	Walla Walla Business College	2	2	21	104	30	59	51	163	54	25	6	2
Wenatchee	Wenatchee Business College	......	4	20	118	12	14	32	132	45	10	5½	2
WEST VIRGINIA.													
Bluefield	Bluefield Normal and Business College	1	......	7	24	5	4	12	28	15	6	7	3
Do.	Summit City Business College	1	2	15	140	12	28	27	168	65	12	6	2
Charleston	Capital City Commercial College	1	2	67	292	57	114	124	406	175	75	6	2
Clarksburg	West Virginia Business College	1	3	40	150	20	50	60	200	175	75	5½	2
Huntington	Boothe Business School	1	4	50	250	35	45	85	295	90	35	6½	2
Martinsburg	Martinsburg Business College	1	4	15	39	46	24	61	63	45	40	6	2
Wheeling	Elliott Commercial School	4	3	93	330	66	124	159	454	184	110	5½	2
WISCONSIN.													
Appleton	Actual Business College	2	1	20	59	4	11	24	70	48	12	5½	2
Do.	Appleton Business College	2	3	75	255	......	......	75	255	140	......	5½	......
Ashland	Gordon's Business College	1	1	12	56	6	12	18	68	40	10	6	2
Baraboo	Baraboo Business College	1	2	9	77	3	38	12	115	30	15	6	2
Eau Claire	Hunt's Business College	2	1	42	149	8	14	50	163	80	10	6	2
Green Bay	Badger Commercial College and Telegraph School	3	1	25	41	4	20	29	61	50	20	6	2
Do.	Green Bay Business College	1	4	17	139	......	......	17	139	80	......	5	......
Janesville	Janesville Business College	1	3	9	114	6	15	15	129	69	15	6	3
La Crosse	Wisconsin Business University	2	4	170	112	......	......	170	112	300	......	5½	......
Madison	Capital City Commercial College	5	2	109	205	......	......	109	205	200	......	5½	......
Do.	Success Shorthand School	......	4	6	73	......	......	6	73	40	......	7½	......
Manitowoc	Manitowoc Business College	1	2	38	63	15	20	53	83	50	25	6½	2
Marinette	Twin City Commercial School	1	1	18	83	19	58	37	141	50	20	6	2½
Merrill	Merrill Commercial College	2	1	25	30	......	......	25	30	45	......	6	......

Columbus Business College	6	7	6	50	....	7	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Crawfordsville Business College	6	11	13	32	1	2	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Elkhart Business College	30	35	15	105	....	....	....	....	13	150	6	13	75	6	....	....	....	....	....	....	12	6	....	....
Lockyear's Business College	111	57	20	424	4	10	....	....	15	80	6	15	80	6	15	150	....	....	....	....	8	8	....	....
International Business College	85	30	35	265	175	500	....	....	15	75	4	15	75	4	15	135	4	....	....	....	6	6	10	....
Frankfort Business College	3	20	8	64	....	12	....	....	6	52	4	6	35	4	6	65	4	....	....	....	9	6	12	....
Central Business College	120	42	175	893	70	96	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Iles De Vor Commercial School	....	....	11	60	2	12	....	....	....	....	....	12	50	4	....	....	....	....	....	....	....	5-6	....	....
Clark School of Business	19	15	21	81	4	6	....	....	12	....	5	12	....	5	12	....	5	....	....	....	6	4-8	10-15	....
Kokoma Business College	20	7	12	108	3	6	....	....	12	60	5	12	60	5	12	110	....	....	....	....	6	6	12	....
La Fayette Business College	40	90	25	225	5	15	....	....	12	60	5	12	60	5	12	110	....	....	....	....	6	6	12	....
La Porte Business College	9	15	1	25	....	10	....	....	13	156	5	13	117	5	13	156	5	....	....	....	12	9	12	....
Indiana Business College	11	9	12	88	5	16	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Marion Business College	30	11	26	213	44	36	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
New Albany Business College	55	85	42	150	20	62	....	....	13	75	5	13	75	5	13	150	5	....	....	....	6	6	12	....
Indiana Business College	6	11	16	85	2	....	....	....	12	60	5	12	60	5	....	110	....	....	....	....	6	6	12	....
Noblesville Business College	....	....	....	....	4	46	....	....	....	....	....	....	....	....	12	[4] 66	....	....	....	....	....	....	8	....
Peru Business College	5	9	2	76	3	4	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Richmond Business College	28	24	16	123	17	36	....	....	15	....	6	15	....	6	15	[2] 132	....	....	....	....	6	6	12	....
Seymour Business College	10	....	....	40	15	85	....	....	....	....	5	....	....	5	10	75	....	....	....	....	....	....	8	....
Kelley Business School	10	14	4	32	....	....	....	....	12	....	6	12	....	6	....	....	....	....	....	....	8	8	....	....
South Bend Business College	79	90	7	118	24	140	....	....	15	75	6	15	75	6	15	140	....	....	....	....	6-8	6-8	12-14	....
Thomas School of Stenography and Typewriting	....	1	13	84	....	....	....	....	....	60	....	....	70	6	....	....	....	....	....	....	5	6	....	....
Brown's Business College	50	90	45	186	24	40	....	....	15	85	5	15	85	5	15	125	....	....	....	....	7	7	12	....
Wabash Commercial School	90	65	35	190	6	40	....	....	13	80	5	13	80	5	13	120	....	....	....	....	7½	7½	12	....
Dodge's Telegraph Railway Accounting and Radio (Wireless) Institute	....	....	....	....	....	....	300	100	....	....	....	....	....	....	....	....	15	$60	....	....	....	....	....	6
Vincennes Business College	40	14	9	109	2	8	....	....	15	90	6	15	90	6	15	180	....	....	....	....	6	6	12	....
Washington Business College	9	3	11	45	....	....	....	....	12	60	5	12	60	5	....	....	....	....	....	....	6	6	....	....
IOWA.																								
Belle Plaine Business College	2	....	....	4	5	25	....	....	10	60	....	10	60	....	10	90	....	....	....	....	4-6	4-6	10-14	....
Cedar Rapids Business College	166	85	47	392	18	29	....	....	15	85	....	15	85	....	15	140	....	....	....	....	8-10	7-9	14-16	....
Chariton Business College	6	5	1	13	1	2	....	....	10	....	....	10	....	....	10	....	....	....	....	....	6-9	7½-9	12	....
Clinton Business College	24	8	8	65	16	48	....	....	15	85	5	15	85	5	15	120	5	....	....	....	7	7	12	....
Boyles Iowa College	51	37	30	187	5	25	....	....	7	50	4	7	50	4	7	90	4	....	....	....	6-8	6-8	12-15	....
Hammill College and Business Institute	29	45	22	165	....	....	....	....	7	50	4	7	50	4	....	....	....	....	....	....	6	6	....	....
Brown's Davenport Business College	58	10	40	150	75	50	....	....	13	75	5	13	75	5	13	120	5	....	....	....	6-9	6-9	12	....
Valder College	50	25	20	40	2	4	....	....	10	....	....	10	....	....	13	....	....	....	....	....	6	6	10	....
Capital City Commercial College	213	83	65	831	34	23	....	....	15	100	5	15	100	5	15	125	5	....	....	....	9	7	12	....
Bayless Business College	36	16	27	195	10	25	....	....	15	100	6	15	100	6	15	150	....	....	....	....	7½	7½	12	....
Fort Dodge Business College	9	7	1	24	9	67	....	....	10	....	....	10	....	....	10	....	....	....	....	....	9	7	9	....
Fort Madison Business College	35	10	20	65	30	40	....	....	12	85	....	12	85	7	12	140	....	....	....	....	8	7	14	....
Irish's Business College	32	18	10	106	....	....	....	....	15	[2] 80	....	15	[2] 80	....	....	....	....	....	....	....	9	9	....	....
Tri-State Commercial College	4	4	5	52	1	....	....	....	13	75	5	13	75	5	13	120	....	....	....	....	6	6	12	....
Hamilton's University of Commerce	73	240	26	192	40	228	....	....	13	87	....	13	75	....	13	100	....	....	....	....	12	7	15	....
Brown's Muscatine Business College	10	5	10	23	7	7	....	....	15	75	....	15	75	....	15	125	....	....	....	....	6	6	12	....
Oelwein Business College	16	....	4	130	3	16	....	....	12	....	5	12	....	5	....	....	....	....	....	....	....	....	....	....
Iowa Success School	20	13	5	162	5	5	....	....	13	90	6	13	90	6	15	150	....	....	....	....	9	9	18	....

[1] Night school. [2] If course is completed in prescribed time. [3] Tuition fee for 1 year. [4] Tuition fee for 6 months.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school
1	2	3	4	5	6	7	8	9	10	11	12	13	14
COLORADO.													
Denver	Y. M. C. A. Business School	5		30		60		90		14	10	6	2
CONNECTICUT.													
Bridgeport	Y. M. C. A. (commercial department)	2				66	30	66	30		40		2
Hartford	Hillyer Institute Y. M. C. A. (commercial department).	6				160		160			50		2
DELAWARE.													
Wilmington	Y. M. C. A. Evening School (commercial department).	7				53		53			22		2
DISTRICT OF COLUMBIA.													
Washington (1736 G St., NW)	Washington Commercial School (Y. M. C. A.)	6				330		330					
Do	Washington School of Accountancy, Y. M. C. A.	9		200	18	230		430	18			2	2
GEORGIA.													
Augusta	St. Patrick's Commercial Institute	5		160				160		140		4½	
ILLINOIS.													
Belleville	Cathedral Commercial High School	1		29				29		29		6	
Chicago (19 S. La Salle St.)	Central Y. M. C. A. Institute (commercial department).	13		168		453		621		78	75	½	1
Chicago (1456 Oakdale Ave.)	St. Alphonsus School (commercial department)		4	27	55			27	55	82		5	
Chicago	St. Andrew's School		12		43				43	43		5	
Chicago (2954 Archer Ave.)	St. Bridget's Commercial School		1		43				43	35		6	
Chicago (521 N. Paulina St.)	St. Columbkille High School		2		36				36	36		5	
Chicago (1683 Cleveland Ave.)	St. Michael's High School	2	2	43	53			43	53				
Chicago (Canal St.)	St. Patrick's Commercial Academy	15		497				497					
Chicago (3210 Athington St.)	Sears-Roebuck Y. M. C. A. Schools (commercial department).	2				43		43			26		3
Chicago (1621 Division St.)	Y. M. C. A. Commercial School	2				26		26					3

Dague Business Colllege	105	30	50	415	16	9	.....	.....	12	79	5	12	79	5	12	117	.....	.....	.....	.....	9	9	12–18	.....
Wichita Business College	235	205	105	345	225	105	.....	.....	14	.....	6	14	.....	6	14	.....	.....	.....	.....	.....	9	6	15	.....
KENTUCKY.																								
Curtis Commercial College	50	64	64	88	18	23	.....	.....	.....	50	4	.....	50	4	.....	90	4	.....	.....	.....	6	6	12	.....
Danville Business School	2	48	5	53	2	9	.....	.....	.....	35	.....	.....	40	.....	.....	75	.....	.....	.....	.....	6	5	.....	.....
Fugazzi School of Business	.....	13	21	300	10	250	.....	.....	10	25	5	10	45	5	10	65	.....	.....	.....	.....	3	5	6	.....
Bryant and Stratton Business College	87	71	45	354	.....	.....	.....	.....	15	115	5	15	115	5	.....	.....	.....	.....	.....	.....	6	10	.....	.....
Clark School of Business	15	24	45	151	22	73	.....	.....	12	[2] 55	5	12	[2] 55	5	12	.....	5	.....	.....	.....	4	5	9	.....
Creager Business School	28	21	17	132	4	29	.....	.....	12	50	5	10	45	5	12	85	.....	.....	.....	.....	3–6	3–6	6–10	.....
Spencerian Commercial School	119	35	31	312	105	155	.....	.....	14	.....	6	14	.....	6	14	[1] 150	.....	.....	.....	.....	9	9	12	.....
LOUISIANA.																								
Baton Rouge Business College	50	50	35	165	10	25	1	3	12	75	5	12	75	5	12	.....	.....	4	.....	.....	4	4	8	4
Lake Charles Business College	15	5	16	123	23	19	.....	.....	10	60	8	10	57	8	15	90	10	.....	.....	.....	3–5	3–5	5–7	.....
Guillaume College	.....	1	2	95	.....	.....	.....	.....	5	.....	3	5	.....	3	.....	.....	.....	.....	.....	.....	3–6	3–6	.....	.....
Reaser School	18	14	16	67	.....	.....	.....	.....	8	40	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	5–6	.....	.....	.....
Soulé Commercial College	433	67	346	614	.....	.....	.....	.....	([3])	.....	7	11	.....	6	.....	.....	.....	.....	.....	.....	6–12	8–9	.....	.....
Twentieth Century School	1	2	2	71	.....	.....	.....	.....	8	24	5	8	40	5	.....	.....	.....	.....	.....	.....	3–4	4–5	.....	.....
Draughon's Practical Business College	64	47	37	255	7	28	.....	.....	[4] 15	50	5	[4] 15	50	5	[4] 15	85	.....	.....	.....	.....	4–6	4–6	8–10	.....
MAINE.																								
Maine School of Commerce	24	14	8	40	6	23	.....	.....	10	.....	5	10	.....	5	10	.....	5	.....	.....	.....	5	6	8	.....
Shaw's Augusta Business College	28	2	4	45	2	1	.....	.....	13	.....	6	13	.....	6	13	.....	.....	.....	.....	.....	6	7	11	.....
Beal Business College	8	14	6	49	1	7	.....	.....	13	.....	5	13	.....	5	13	.....	5	.....	.....	.....	6½	6½	9–10	.....
Doe Business College	5	6	5	24	5	7	.....	.....	10	.....	4	10	.....	4	10	.....	4	.....	.....	.....	7	7	12	.....
Bliss Business College	61	38	10	35	.....	.....	.....	.....	10	80	6	10	80	6	.....	.....	.....	.....	.....	.....	8	6–8	.....	.....
Gray's Portland Business College	49	67	20	144	3	27	.....	.....	12	.....	.....	12	.....	.....	12	.....	.....	.....	.....	.....	7–9	5–9	10	.....
Miss Sawyer's Shorthand School	.....	.....	1	35	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	.....
Shaw's Portland Business College [6]	184	57	31	335	14	230	33	30	13	.....	6	13	.....	6	13	.....	.....	13	.....	$6	6	6	9	6
Rockland Commercial College	11	1	.....	53	.....	.....	.....	.....	10	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	6–8	6–8	.....	.....
Thornton Academy	.....	.....	.....	.....	52	105	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	.....	.....	.....	.....	.....	30	.....
Thomas Business College	12	9	2	13	28	40	.....	.....	10	75	5	10	75	5	10	100	5	.....	.....	.....	6–8	6–8	10–12	.....
MARYLAND.																								
American Shorthand School	.....	.....	4	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	7	.....	.....
Calvert Business College	.....	.....	35	190	.....	.....	.....	.....	.....	.....	.....	12	80	5	.....	.....	.....	.....	.....	.....	3–6	.....	.....	.....
Eaton and Burnett Business College	67	20	89	529	60	300	.....	.....	12	.....	5	12	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Frederick City Night School	3	6	3	38	.....	.....	.....	.....	.....	.....	4	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbia College	34	21	28	114	.....	.....	.....	.....	10	60	4	10	60	4	.....	.....	.....	.....	.....	.....	9	9	.....	.....
Beacom Business College	32	12	13	98	.....	.....	.....	.....	15	.....	5	15	.....	5	.....	.....	.....	.....	.....	.....	7	7	.....	.....
MASSACHUSETTS.																								
Boston School of Telegraphy	.....	.....	.....	.....	.....	.....	77	193	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	75	6	.....	.....	.....	6
Bryant and Stratton Commercial School	355	175	105	550	.....	.....	.....	.....	22	.....	8	22	.....	8	.....	.....	.....	.....	.....	.....	10	5–9	.....	.....
Burrough's Adding Machine Company's School	.....	195	.....	.....	.....	.....	.....	.....	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....

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[1] If course is completed in prescribed time.

[2] Tuition fee for 5 months.

[3] Tuition fee, $10 to $15 per month.

[4] Tuition reduced after first month.

[6] Includes one branch school.

TABLE 19.—*Teachers, students, and attendance in Y. M. C. A. and denominational business schools reporting in 1917–18*—Continued.

Location.	Institution.	Teachers.		Students enrolled.						Average daily attendance.		Hours per day.	
				In day courses.		In night courses only.		Total.					
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day school.	Night school.	Day school.	Night school.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MINNESOTA.													
Duluth	Y. M. C. A. Schools (commercial department)	1				28		28			16		2
Minneapolis (44 South 10th St.)	Central Branch Y. M. C. A. (commercial department).	3		35		162		197		20	60	6	2
St. Paul	Y. M. C. A. Night School (commercial department).	6				124		124			40		2
MISSOURI.													
St. Joseph	Y. M. C. A. Schools (commercial department)	1				5		5			5		1
St. Louis (Grand and Franklin Aves.).	Ralph Sellew Institute			6		200		206		5		5½	
St. Louis (1411 Locust St.)	Y. W. C. A. (commercial department)		3		101		112		213			5	2
Washington	St. Francis Borgia Commercial School		1	4	6			4	6	10		7½	
NEBRASKA.													
Omaha	Y. M. C. A. Night School (commercial department).	3				100		100			42		2
NEW JERSEY.													
Camden	Y. M. C. A. Institute (commercial department)	3				50		50			39		2½
Hoboken	School of Our Lady of Grace (commercial department).		1	14	34			14	34	48		5	
Jersey City	St. Paul's Academy (commercial department)		1		33				33	32		5	
Newark (111 Halsey St.)	Y. M. C. A. (commercial department)	12			89	441		441	89				
Newark (53 Washington St.)	Y. W. C. A. (commercial department)		3		54		23		77	50	18	3	2
NEW YORK.													
Brooklyn (1121 Bedford Ave.)	Bedford Branch, Y. M. C. A. Schools (commercial department).	7				284		284			200		2
Brooklyn (55 Hanson Place)	Marquand School, Y. M. C. A. (commercial department).	5		47		467		514		45	383	5½	2½

Cornell Shorthand School	33	23	22			51			10		5	10		5	10									
Michigan Business and Normal College	12	8	8	42	28	60			15	[4]65		15	[4]65		15						6-9	6-9	9-15	
Ferris Institute	100	162	140	306			60	15	10	75		10	75					10	$75		9	9		
Business Institute	311	485	126	807	49	581			12		5	12		5	12		5				6	6	12	
Central Business College	26	8	19	122	20	28			10		5	10		5	10						6	6	12	
Cloverland Commercial College	19	24	18	78	6	74			10		5	10		5	10		5							
Baker Business University	200	90	5	325					10	75	4	10	75	4							6-8	6-8		
Churchill's Business Institute	13	23			13	23			12	85					12	125					5-8		8-12	
McLachlan Business University	90	210	136	350	158	300			15	100	5	15	100	5	15	150	5				8	8	12	
Twin City Commercial College	24	10	6	64		56			11	[5]90	5	11	[6]90	5	11						10			
Actual Business College	12	5		10	13	12			12	65	5	12	65	5	12	100					6-12	6-12		
Ironwood Business College	14	21	20	63	7	19			10	85	5	10	85	5	10	85					8-10	8-10	10	
Ishpeming Business College	6	15	8	30	7	12	4		10		5	10		5	10	5	5	10		$5	8	8	12	4
Allen's Business College	9	6	6	92		4			10		3	10		3	10						6-10		8-10	
Jackson's Business University	10	15	80	5	25				10	68		10	68		10						7	7		
Maher's Business College	26	12	1	75	10				10	50	5	10	50	5	10	110	5				6	6	10	
Carson's Business College	23	19	23	139	34	35			12	[5]100	6	12	[5]100	6	12						9	9	15	
Lansing Business University	54	25	12	143	19	35			15	85		15	85		15	140					9	9	15	
Laurium Commercial School	15	38	10	169	6	15	7	5	11	[5]85	5	11	[5]85	5	11		5	11		5	10	10	18	6
Ludington Business College	6	5	5	39					10		4	10		4							6-8	9-10	12-15	
Manistee Business College	2	1	13	57	2	2			10		5	10		5	10						6-9	6-9	6-9	
Marquette Business College	16	15	22	58					10	60	5	10	60	5							4-6	6-8		
Monroe Business University	24	7	27	77					12	75	5	12	75	5							8	8		
The Business Institute	13	13	5	28	2	11			10		5	10		5							6-8	6-8	10-12	
Muskegon Commercial College		87		68		20			12	87		12	87		12	100					4-6	5-8	10-12	
Owosso Business College	33	4		36		1			10	65		10	65		10	105					9	9	18	
Port Huron Business College	28	26	35	17	10	39			13	80	5	13	80	5	13	120					7	6	10	
MINNESOTA.																								
Albert Lea Commercial College	41	21	6	76	19	27			15	85	7	15	85	7	15	100	7				9	9	12-15	
University of Southern Minnesota	40	25	6	63	12	36	20	32	10	80		10	80		12	90		10	$50		12	10	15	8
Bemidji Business College	1		1	8		9			15	100	8	15	100	8	15	100					9	9	9	
Crookston College	62	5	17	42	10	3			15	150	7	15	150	7	15	150					6-12	6-12	9-18	
Hughes Business College	5	50	4	51	5	50			10	[6]50		10	[6]50		10						6	6	6-9	
Central Business College	43	39	26	129	11	28			12	[5]65	5	12	[6]65	5	12	[7]110					6	6	10-12	
Duluth Business University	20	180	61	413					12	65	5	12	65	5							6	6		
Parsons Business University	9	3	10	9	3	4			10	60	5	10	60	5	10	60					6	6	12	
Mankato Business and Commercial College	670	460							12	70											6-9			
American Business College	108	15	25	183	15	50			16	[6]115	5	16	[6]115	5	16	[7]165					6-8	6-8	12-16	
American Telegraph College							58	291										20	70	5				4
Barry's Telegraph Institute							70	82										20	75	5				4-6
Collegiate Business Institute					1	150													125					6
Gregg Shorthand School				64								15	70									4-7		
Hillman Shorthand School	3	17							15												3-6			
Humboldt College	24	19	19	76	5	29			12	85	5	12	85	5	12	125					6-9	6-9	12	
Minneapolis Business College	235	65	115	408					15			15									8	8		
Minnesota College	53	34	11	98	20	43			10	60	5	10	60	5	10	60					9	9	9	
Munson Shorthand School			6	32								15	75									4-6		
Northwestern Business College	36	248	20	249	10	66			10	50	5	10	50	5	10	75	5				6	6	9	

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[1] Commercial course in labor-saving machinery.
[2] Tuition fee for 10 weeks.
[3] Tuition fee for 38 weeks.
[4] Tuition fee for 6 months.
[5] If course is completed in time prescribed.
[6] Tuition fee for 10 months.
[7] Tuition fee for 1 year.

ABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
MINNESOTA—continued.																								
Canfield School	18	9	7	30	.....	.....	.....	.....	$15	[1] $100	$5	$15	[1] $100	$5	.....	.....	.....	.....	.....	.....	6–12	6–12	.....	.....
St. Cloud Business College	34	10	3	22	16	38	.....	.....	12	55	.....	12	55	.....	$12	$55	.....	.....	.....	.....	6	6	12	.....
Globe Business College	65	34	51	204	12	55	.....	.....	12	65	6	12	65	6	12	120	$6	.....	.....	.....	6	6	12	.....
Lancaster Business Institute	65	94	59	142	33	76	.....	.....	12	.....	5	12	.....	5	12	.....	5	.....	.....	.....	8	8	.....	.....
Pioneer Business School	29	88	17	133	.....	.....	.....	.....	12	.....	6	12	.....	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Rasmussen St. Paul Practical Business School	120	30	40	470	20	100	.....	.....	15	[2] 80	.....	15	[2] 80	.....	15	.....	.....	.....	.....	.....	6–12	6–9	14	.....
Rasmussen Stillwater Practical Business School	15	11	13	23	10	14	.....	.....	10	.....	5	10	.....	5	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Willmar Seminary	31	10	13	45	7	8	.....	.....	6	51	.....	6	51	6	6	102	.....	.....	.....	.....	8½	8½	17	.....
Winona Business College	28	13	4	66	41	167	6	22	12	140	5	12	70	5	12	140	5	.....	.....	$5	12–14	6–8	12–14	.....
MISSISSIPPI.																								
Hattiesburg Business College	3	10	10	25	2	10	.....	.....	12	50	.....	12	50	.....	12	85	.....	.....	.....	6	5–6	9–12	.....	.....
Draughon's Practical Business College	68	42	40	250	15	35	.....	.....	15	50	5	15	50	5	18	80	5	.....	.....	.....	5	5	8	.....
MISSOURI.																								
Dunkles Business School	60	25	.....	30	.....	.....	.....	.....	8	.....	4	8	.....	4	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Cape Girardeau Business College	79	13	22	188	30	2	18	11	10	60	4	10	65	4	10	100	.....	$10	$60	4	6	7	11	6
Business School	.....	3	4	31	1	12	.....	.....	5	30	3	5	50	3	5	75	.....	.....	.....	.....	8	6	11	.....
Rude's Business School	27	23	4	107	16	28	.....	.....	10	60	5	10	60	5	10	100	5	.....	.....	.....	8	8	12	.....
Chillicothe Business College	175	250	108	592	225	630	176	104	15	75	.....	15	75	.....	15	110	.....	15	75	.....	6	6	10	6
Jackson University of Business	35	29	27	39	31	38	.....	.....	.....	75	.....	.....	75	.....	.....	100	.....	.....	.....	.....	6	6	8	.....

De Soto Business College	9	3	10	50	9	3			13	66	5	13	66	5	13	120					6	6	10	
Ozark Business College	10	8	8	49	19	18			13	75		13	75		13	125					7	7	11	
Huff's School of Expert Business Training	40	65	115	976					15		5	15		5							7	7½–8		
Kansas City Business College	38	99	59	470	42	131			12	[2] 60	6	12	[2] 60	6	15	[2] 75	8				6–9	6–9	6–9	
Powell's Shorthand School			2	14								10	60	5								6		
Moberly Commercial College	7	1	18	76	7	2			17	65	6	17	65	6	17	100	6				5	4	7	
Nevada Business College	28	37	26	79	15	25			[3] 15	67	5	[3] 15	67	5	[3] 15	113					6	6	12	
St. Joseph Business University	66	19	45	260	10	40			12	[2] 65	6	12	[2] 65	6	12	110					6–9	6–9	10–15	
St. Joseph Commercial College					155										6	180							30	
Barnes Business College	21	29	50	140	2	8			13	[2] 65	5	13	[2] 65	5	13	110	8				6–9	6–9	12–16	
Brown's St. Louis Business College	10	4	40	103	20	61			10	60	5	10	60	5	10	80					6	6	8–10	
Do	20	38	28	130	30	56			12	75	7	12	75	7	12	120	7				6–7	4–6	8–10	
Do	40	10	43	103	28	13			12	75	7	12	75	7	12	125	7				6–9	6–7	12	
Jones Commercial College	50	65	40	150	50	35			13	75	7	13	75	7	15	125					6	6	12	
Sanguinet Shorthand School				93								13		6								4–5		
Southwestern Railroad Telegraph School							13	47											50	5				5
Union Electric Telegraph School							75	140										15	75	10				3–6
Draughon's Practical Business College	54	21	120	416	24	20			15	70	5	15	70	5	15	100	5				5	6	10	
Springfield Business College	140	210	200	300	340	510	300			60			60			60			60		6	6	9–10	6
West Plains Business College	5	6	10		10	8			7		6	7		6	7		6							
MONTANA.																								
Billings Business College	80	65	26	215	10	75	5	25	15	75	6	15	75	6	15	125		15	75		6	6	10–12	6
Bozeman Business College	8	5	7	50					15	100	6	15	100	6							6	6		
Great Falls Commercial College	90	40	50	350		25			15	90	8	15	90	8	15	175	8				9	9	18	
Helena Business College	37	102	13	273					15	70	6	15	70	6							6	6		
Fergus Business College	8			66					15	100	8	15	100	8							6	8		
Missoula Business and Normal College	23	15	12	70	4	12		23	15	100	8	15	100	8	18	175		15			8–10	8–9	15	
NEBRASKA.																								
Cotner Commercial College	7			3		1			8			8			8									
Northwestern Business College	4	2	1	10	5	26			15	85		15	85		15	100					6	6	9–15	
Fremont College					89	372										60							6	
Hastings Business College	15	3	7	18	45	49			10	80		10	80		10	125					7–9	6–9	9–14	
Lincoln Business College	43	143	125	405	16	38				[2] 75			[2] 75			[2] 125					6–9	6–9	9–12	
Nebraska School of Business	14	12	52	288	14	35			9												7–9	6–9	9–12	
McCook Business College			4	18									75									3		
Norfolk Business College	4	19		241	6				10	75	5	10	75		10	125					14			
Boyles Commercial College	120	43	158	713	51	70	61	17	15	([4])	6	15	([4])		15	110	6	15	65	6	6–8	6–8	12–15	4–6
Van Sant School of Business		19	6	320		160			15			15		8	15						5	7	8	
St. Paul Normal and Business College	8	11	6	15	18	17			10	90	3	10	90	3	10	125	3				9	9	11	
York College School of Commerce	80	101	40	80					15	120		15	90								9	6		
NEVADA.																								
Reno Business College	5	26	20	109	3	21			13		6	13		6	13		6				6–8	6–8	10–12	

[1] Tuition fee for 1 year.
[2] Tuition fee for 6 months.
[3] Tuition fee reduced after first month.
[4] Tuition, $65 to $80.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting, in 1917-18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
CALIFORNIA.																								
Berkeley Business College	18	66	21	50	15	184	10	18	$15	$75	$6	$15	$75	$6	$15	$100	$6	$10	$50	$10	6	6	9-10	6
Heald's Business College, Chico	27	6	6	66	12	69	....	....	15	[1] 90	6	15	[1] 90	6	15	[1] 125	....	....	....	....	6-8	6-8	8-12	....
Heald's Fresno College	95	177	35	282	10	31	....	....	15	[2] 90	5	15	[2] 90	5	15	[1] 125	5	....	....	....	8	8	12	....
Glendale Commercial School	8	5	2	35	10	40	....	....	10	....	5	5	....	5	10	....	5	....	....	....	....	....	....	....
California Brownsberger Commercial College	90	140	71	349	30	60	....	20	20	160	10	20	160	10	20	240	....	20	160	....	8	8	12	8
Central Business College	9	40	9	142	....	....	....	....	10	30	6	10	30	6	....	....	....	....	....	....	3	3	....	....
Coast College of Lettering	[3] 13	[3] 10	....	....	....	....	....	....	....	25	....	....	....	....	....	....	....	....	....	....	5-8	....	....	....
Hollman Business College	35	40	15	105	....	....	....	....	15	[2] 80	8	15	[2] 80	8	....	....	....	....	....	....	6	6	....	....
Mackay Business College	42	384	77	709	33	357	49	438	13	55	6	13	55	6	15	68	6	15	68	6	6	6	6-8	6-8
Santa Fe Telegraph Schools	....	....	....	....	....	....	16	64	....	....	....	....	....	....	....	....	....	[4] 10	....	....	....	....	....	6
School of Commerce, Accounts and Finance, Southwestern University [5]	7	3	....	....	....	....	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....
Shorthand Institute	....	....	4	21	....	....	....	....	....	....	....	16	....	5	....	....	....	....	....	....	....	6	....	....
Willis-Woodbury Business College	82	54	70	586	....	....	....	....	13	[2] 80	6	13	[2] 80	6	....	....	....	....	....	....	6	6	....	....
Napa Business College	10	6	7	69	4	7	....	....	12	[6] 115	5	13	[6] 115	5	13	[6] 115	....	....	....	....	8-9	8-9	12-14	....
Heald's Oakland Business College	70	73	26	207	1	10	....	....	15	[7] 75	6	15	[7] 75	6	15	[7] 75	6	....	....	....	6-8	6-8	12-15	....
Pott's Business College	49	118	37	212	6	104	....	....	15	....	5	15	....	5	15	....	5	....	....	....	6-8	6-8	10	....
Pomona Business College	4	6	2	11	5	27	....	....	10	50	6	10	50	6	12	80	6	....	....	....	6	6	....	....
Heald's Sacramento Business College	120	250	50	320	....	....	....	....	13	....	6	13	....	6	....	....	....	....	....	....	8	8	....	....
California Commercial College	37	41	17	270	6	19	....	....	13	[7] 75	6	13	[7] 75	6	13	[8] 135	6	....	....	....	6-8	6-8	12-14	....
Kelsey-Jenney Commercial College	51	72	39	249	....	....	....	....	13	[6] 110	6	13	[6] 110	6	....	....	....	....	....	....	7	7	....	....
San Diego Business and Academic College	....	....	....	....	58	28	....	....	....	....	....	....	....	....	13	120	10	....	....	....	....	....	12	....
Chicago Business College	....	....	....	....	....	150	....	....	....	....	....	....	....	....	10	100	5	....	....	....	....	....	12	....
Heald's San Francisco Business College	1,300	2,100	1,100	2,300	450	750	400	100	15	[7] 75	6	15	....	6	15	....	6	15	....	6	6-8	6-10	12-15	....

Heimbach's Trenton Business School	13	3	19	92	8	7	....	....	14	[2] 140	5	14	[2] 140	5	14	[2] 140	5	....	....	....	6-12	5-8	12-18	....
Rider-Moore and Stewart School	280	170	170	320	173	410	....	....	16	....	6	16	....	6	16	....	6	....	....	....	10	8	10	....
Vineland Business School	11	24	22	119	4	23	....	....	15	....	6	15	....	6	15	....	6	....	....	....	6-9	5-9	7-12	....
NEW MEXICO.																								
Albuquerque Business College	43	22	14	65	10	76	....	....	18	....	6	18	....	6	18	....	6	....	....	....	6-12	6-12	6-12	....
Standard Business School	10	25	10	77	20	112	....	....	7	....	7	7	....	7	12	....	12	....	....	....	....	....	....	....
NEW YORK.																								
Albany Business College	165	49	227	646	47	40	....	....	15	....	5	15	....	5	15	[3] 125	....	....	....	....	6-7	6-7	10-12	....
Comfort School of Stenography	....	....	5	40	....	....	....	....	....	....	....	7	....	....	....	....	....	....	....	....	....	7-8	....	....
Reynolds Business School	23	10	12	24	43	36	....	....	9	....	4	9	....	4	9	....	4	....	....	....	5-7	6-8	8-10	....
Auburn Business School	27	26	6	53	....	....	....	....	10	....	5	10	....	5	....	....	....	....	....	....	8-10	8-10	....	....
Williams School	....	....	1	34	....	....	....	....	....	....	....	10	75	5	....	....	....	....	....	....	....	6	....	....
Blount's Business School	2	12	1	51	....	10	....	....	10	30	....	12	60	....	14	90	....	....	....	....	3	5	8	....
Binghamton School of Business	12	17	18	113	7	16	....	....	10	60	5	10	55	5	10	100	5	....	....	....	6	6	....	....
Lowell School of Business	39	52	33	265	6	37	....	....	13	83	5	13	83	5	13	110	5	....	....	....	7-9	7-9	12-14	....
Alpha School of Business	95	45	30	150	35	145	....	....	10	60	5	10	60	5	10	100	5	....	....	....	7-8	6-7	10-12	....
Avon School of Secretaries	8	1	8	94	3	17	....	....	12	....	6	12	....	6	12	....	6	....	....	....	3	4	9	....
Browne's Business College	206	92	437	1,161	9	12	36	9	12	....	5	12	....	5	12	....	5	12	....	5	....	....	....	....
Curtis Business School	....	....	19	44	....	5	....	....	....	....	....	10	....	6	12	....	....	....	....	....	....	6-8	8-10	....
Euclid School	....	....	....	....	300	900	....	....	....	....	....	....	....	....	12	....	5	....	....	....	....	....	7-12	....
Excelsior Business School	75	80	125	175	85	185	....	....	10	75	5	10	75	5	10	125	....	....	....	....	6	7	12	....
Heffley Greenpoint School	68	98	111	186	....	....	....	....	12	48	5	12	96	5	....	....	....	....	....	....	5	8	....	....
Heffley Institute	130	141	327	942	....	....	....	....	12	....	5	12	....	5	....	....	....	....	....	....	8	8	....	....
Lamb's Business Training School	90	110	65	220	....	....	....	....	10	....	5	10	....	5	....	....	....	....	....	....	6-12	6-8	....	....
Long Island Business School	61	19	62	289	22	85	....	....	10	....	5	10	....	5	10	....	....	....	....	....	6-8	5-7	7-10	....
Miner's Business Academy	19	11	44	239	10	38	....	....	12	....	5	12	....	5	12	....	5	....	....	....	6-8	6-8	8-12	....
Mockridge Business School	43	34	80	100	44	78	....	....	10	65	5	10	65	5	10	110	5	....	....	....	6	6	12	....
People's Business School	25	445	25	105	50	550	....	....	10	65	5	10	65	5	10	90	5	....	....	....	6	6	9	....
Wood's Business School	55	52	175	365	34	185	....	....	12	70	5	12	70	5	12	115	5	....	....	....	6	6	12	....
Chown School of Business	8	25	40	216	11	91	....	....	10	....	5	10	63	5	10	108	5	....	....	....	5	7	12	....
M. A. Burns School of Shorthand	....	....	11	74	....	....	....	....	....	....	....	10	60	6	....	....	....	....	....	....	....	6	....	....
Cortland Business Institute	....	....	19	70	....	....	....	....	....	....	....	12	64	....	....	....	....	....	....	....	....	6-8	....	....
Meeker's Business Institute	15	52	48	168	12	41	....	....	[4] 15	85	....	[4] 15	85	....	[4] 15	....	....	....	....	....	7	7	14	....
Gloversville Business School	40	60	8	40	....	....	....	....	11	66	4	11	66	4	....	....	....	....	....	....	6	6	....	....
Hempstead Business School	6	22	4	103	2	30	....	....	10	....	6	10	....	6	10	....	6	....	....	....	....	....	....	....
Jamestown Business College	30	64	17	122	25	61	....	....	12	70	....	12	75	....	12	120	....	....	....	....	7	7	13	....
Moran Business School	30	9	30	49	11	6	....	....	10	[1] 50	4	10	[1] 50	4	10	....	....	....	....	....	6	6	12	....
Spencer's Business School	45	12	45	138	10	5	....	....	10	75	4	10	75	4	10	95	4	....	....	....	6-8	6-8	6-8	....
Bettinger Business Institute	20	35	5	15	20	35	....	....	10	....	5	10	....	5	....	....	....	....	....	....	6-7	6-7	....	....
Lockport Business Institute	....	....	35	65	....	....	....	....	....	....	....	10	....	5	....	....	....	....	....	....	....	6-12	....	....
Middletown School of Commerce	11	12	15	25	4	12	....	....	8	80	5	....	....	5	8	80	5	....	....	....	10	....	....	....
Ramsdell School	8	13	3	29	....	....	....	....	10	....	....	10	....	....	10	....	....	....	....	....	....	6-8	6-8	....
Sherman's Business School	8	12	40	173	13	23	....	....	15	....	6	15	....	6	15	....	6	....	....	....	....	....	....	....
Elms Commercial School	4	....	6	18	6	30	....	....	10	....	4	10	....	4	10	....	4	....	....	....	4	5-6	7-9	....
Brandon-Stevens Institute	32	23	34	145	8	20	....	....	12	....	6	12	....	6	12	....	6	....	....	....	5-6	7-9	12-15	....
Spencerian Business School	25	7	30	172	87	47	....	....	10	86	4	10	86	4	10	100	5	....	....	....	....	....	....	....
Westchester Commercial School	30	12	24	146	26	27	....	....	12	....	5	12	....	5	12	....	5	....	....	....	8	6	14	....

[1] Tuition for 6 months.

[2] Tuition for 1 year.

[3] Tuition for 10 months.

[4] Tuition reduced after third month.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting, in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in— Commercial course. Men.	Commercial course. Women.	Stenographic course. Men.	Stenographic course. Women.	Combined course. Men.	Combined course. Women.	Telegraphy (wire). Men.	Telegraphy (wire). Women.	Tuition fee. Commercial course. Day course, per month.	Commercial course. Entire day course.	Commercial course. Night course, per month.	Stenographic course. Day course, per month.	Stenographic course. Entire day course.	Stenographic course. Night course, per month.	Combined course. Day course, per month.	Combined course. Entire day course.	Combined course. Night course, per month.	Telegraphy (wire). Day course, per month.	Telegraphy (wire). Entire day course.	Telegraphy (wire). Night course, per month.	Months required for graduation (day course). Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
CALIFORNIA.																								
Berkeley Business College	18	66	21	50	15	184	10	18	$15	$75	$6	$15	$75	$6	$15	$100	$6	$10	$50	$10	6	6	9–10	6
Heald's Business College, Chico	27	6	6	66	12	69	.....	.....	15	[1] 90	6	15	[1] 90	6	15	[1] 125	.....	.....	.....	.....	6–8	6–8	8–12	.....
Heald's Fresno College	95	177	35	282	10	31	.....	.....	15	[2] 90	5	15	[2] 90	5	15	[1] 125	5	.....	.....	.....	8	8	12	.....
Glendale Commercial School	8	5	2	35	10	40	.....	.....	10	.....	5	5	.....	5	10	.....	5	.....	.....	.....	.....	.....	.....	.....
California Brownsberger Commercial College	90	140	71	349	30	60	.....	20	20	160	10	20	160	10	20	240	.....	20	100	.....	8	8	12	8
Central Business College	9	40	9	142	.....	.....	.....	.....	10	30	6	10	30	6	.....	.....	.....	.....	.....	.....	3	3	.....	.....
Coast College of Lettering	[3] 13	[3] 10	.....	.....	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5–8	.....	.....	.....
Hollman Business College	35	40	15	105	.....	.....	.....	.....	15	[2] 80	8	15	[2] 80	8	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Mackay Business College	42	384	77	709	33	357	49	438	13	55	6	13	55	6	15	68	6	15	68	6	6	6	6–8	6–8
Santa Fe Telegraph Schools	.....	.....	.....	.....	.....	.....	16	64	.....	.....	.....	.....	.....	.....	.....	.....	.....	[4] 10	.....	.....	.....	.....	.....	6
School of Commerce, Accounts and Finance, Southwestern University [5]	7	3	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shorthand Institute	.....	.....	4	21	.....	.....	.....	.....	.....	.....	.....	16	.....	5	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Willis-Woodbury Business College	82	54	70	586	.....	.....	.....	.....	13	[2] 80	6	13	[2] 80	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Napa Business College	10	6	7	69	4	7	.....	.....	12	[6] 115	5	13	[6] 115	5	13	[6] 115	.....	.....	.....	.....	8–9	8–9	12–14	.....
Heald's Oakland Business College	70	73	26	297	1	10	.....	.....	15	[7] 75	6	15	[7] 75	6	15	[7] 75	6	.....	.....	.....	6–8	6–8	12–15	.....
Pott's Business College	49	118	37	212	6	104	.....	.....	15	.....	5	15	.....	5	15	.....	5	.....	.....	.....	6–8	6–8	10	.....
Pomona Business College	4	6	2	11	5	27	.....	.....	10	50	6	10	50	6	12	80	6	.....	.....	.....	6	6	.....	.....
Heald's Sacramento Business College	120	250	50	320	.....	.....	.....	.....	13	.....	6	13	.....	6	.....	.....	.....	.....	.....	.....	8	8	.....	.....
California Commercial College	37	41	17	270	6	19	.....	.....	13	[7] 75	6	13	[7] 75	6	13	[8] 135	6	.....	.....	.....	6–8	6–8	12–14	.....
Kelsey-Jenney Commercial College	51	72	39	249	.....	.....	.....	.....	13	[8] 110	6	13	[8] 110	6	.....	.....	.....	.....	.....	.....	7	7	.....	.....
San Diego Business and Academic College	.....	.....	.....	.....	58	28	.....	.....	.....	.....	.....	.....	.....	.....	13	120	10	.....	.....	.....	.....	.....	12	.....
Chicago Business College	.....	.....	.....	.....	.....	150	.....	.....	.....	.....	.....	.....	.....	.....	10	100	5	.....	.....	.....	.....	.....	12	.....
Heald's San Francisco Business College	1,300	2,100	1,100	2,300	450	750	400	100	15	[7] 75	6	15	.....	6	15	.....	6	15	.....	6	6–8	6–10	12–15	.....

School of Accounts	40	33									10												
Success Commercial Academy	10	23	20	97					19	[7] 95	8	19	[7] 95	8							5	8		
Heald's Business College, San Jose	67	69	30	236	16	50			15		5	15		5	15		5				8	8	15	
Orange County Business College	14	21	10	36	29	58			15	[2] 90	7	15	[2] 90	7	15	[1] 140	7				8	8	12–14	
Santa Barbara Business College	17	25	7	66		3			15		5	15		5							7–10	7–10		
Santa Rosa Business College	65	60	11	127	2	15			15	[2] 65	6	15	[2] 65	6	15						6	6	10	
COLORADO.																							
Colorado Business College	11	7	9	38	24	55			15	90	6	15	90	6	15	115	6				9	9	12	
Hart's Business College	7	6	9	50	8	10			10	35	5	10	50	5	10	75	5				4	6	6	
Brown's Business College	41	40	30	165	25	68			15	90	6	15	90	6	15	150	6				6	6	12	
Delta Business College	8			3	19	48			12	65	5	12	60	5	12	110	5				7	7		
Barnes Commercial School	130	188	120	650	75	405			15	75	5	15	75	5	15		5				6	6	9	
Central Business College	90	45	30	120	30	50			12	[7] 60	5	12	[7] 60	5	12		5				7–8	6–7	12	
Modern School of Business	48	60	44	197			30	56	15	75	5	15	75	5				15	75	5	6–7	6		6–12
Park's Business School					90	160									14		5						8–20	
Woodworth Shorthand College	16	114							15	100											12			
Hoel-Ross Business College	29	15	11	42	6	121			12		5	12		5	12		5				6–8	6–8	9	
Greeley Commercial College	27	13	8	68		4			12	60	6	12	60	6	12	110					6	6	12	
American Business College	35	36	20	210					15	75	5	15	75	5							6	6		
Colorado State College of Business	26	48	24	70	36	72				65			65			125					6	6	9	
CONNECTICUT.																							
Bridgeport Business College	25	58		26					10		5	10		5							5	9		
New Gutchess College and Secretarial School	20	25	11	155	5	27			12		6	12		6	12		6				8	8	12	
Danbury Shorthand School				18								10												
Derby Business College	19	5	5	28	2	27			12		6	12		6	12		6				6–8	6–8	10–12	
Connecticut Business College	29	23	5	84	3	7			15		5	15		5	15		5				6–8	6–8	12–15	
Huntsinger Business School	30	75	20	200		5			15		5	15		5	15						6	6		
Merchants' and Bankers' Business College	24	11	10	60	5	5			15	125	5	15	125	5	15						8	8	8–10	
Modern Business School	5	2	1	55	4	10			15		5	15		5	15		5				8–10	8–10		
Morse Business College	147	39	19	184					16		5	16		5							10	10		
Winslow's Select Shorthand School			4	77								16		5								6–12		
Pequod Business School	1	5	20	135	9	11			14	120	5	14	120	5	14	150	5				8–10	8–10	15	
Middletown Business College	53	29	6	74	4	30			12		6	12		6	12		6				6–8	6–8	8–10	
Hardware City Business College	12	7	5	23					15		5	15		5							6–10	6–10		
Smith Business School	20	28	2	76	2	30			12	120	5	12	120	5	12	120	5				10	10	10	
Connecticut Business University and School of Tutoring	18	25	11	47	2	2			12		6	12		6	12									
Royal Business College			13	87								15		6								7		
Stebbing Commercial School			32	215	8	98			15			15		6	15		6				8–9	8–9		
Stone Business College	32	142	112	263		6			15		6	15		6	15		6				10	8	12–18	
New London Business College					8	263									15		5						6–12	
Norwich Commercial School	21	13	14	41	8	47			12		6	12		6	12		6				5–10	5–10		
Merrill Business College	32	51	67	69		23			14		5	14		5	14		5				6–10			
Lee's Commercial College	5	2	7	81					10		5	10		5							8–10	8–10		
Booth and Bayliss Commercial School	12	25	2	69					15		6	18		6							4	9		
Waterbury Business College	96	120	52	356					15	[7] 120	5	15	[8] 120	5							10	10		

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[1] Tuition fee for 8 months.
[2] If course is completed in time prescribed.
[3] Show card writing.
[4] For nonresident students, going back and forth, rate of $5 per month is given.
[5] Night school.
[6] Tuition fee for 1 year.
[7] Tuition for 6 months.
[8] Tuition for 10 months.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ILLINOIS—continued.																								
Brown's Freeport Business College	16	28	8	31	23	30	.....	.....	$15	$85	$7	$15	$85	$7	$15	$120	.....	.....	.....	.....	7	7	12	.....
Brown's Galesburg Business College	110	32	18	283	16	52	.....	.....	13	80	5	13	80	5	13	110	.....	.....	.....	.....	9	9	12	.....
Brown's Kankakee Business College	40	17	36	129	25	50	.....	.....	15	95	6	15	95	6	15	140	.....	.....	.....	.....	7½–8	7½–8	12	.....
Paterson Business Institute	32	10	45	134	4	2	.....	.....	12	67	6	12	67	6	12	125	.....	.....	.....	.....	6	6	.....	.....
Litchfield Business College	3	.....	6	10	4	13	.....	.....	10	65	10	10	65	10	15	90	$15	.....	.....	.....	4–6	4–6	6–7	.....
Mattoon Business College	20	5	15	126	2	6	.....	.....	14	.....	5	14	.....	5	14	.....	5	.....	.....	.....	8	8	12	.....
Brown's Moline Business College	23	14	17	184	10	25	.....	.....	15	140	6	15	100	6	15	140	6	.....	.....	.....	6–9	9	12	.....
Southwestern Commercial College	11	11	13	77	9	11	.....	.....	10	75	7	10	75	7	10	100	7	.....	.....	.....	6	5	10	.....
Olney Business College	4	3	4	5	42	68	.....	.....	10	75	5	10	75	.....	10	125	5	.....	.....	.....	6	6	12	.....
Brown's Ottawa Business College	17	18	25	61	2	6	.....	.....	15	95	6	15	95	6	15	140	.....	.....	.....	.....	7	7	12	.....
Cape's Shorthand School [1]	.....	.....	1	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	8	.....	.....
Gem City Business College	198	60	123	554	98	83	.....	.....	15	75	.....	15	75	.....	15	125	.....	.....	.....	.....	6–7	6–7	11–12	.....
Brown's Rockford Business College	77	45	7	157	28	59	.....	.....	18	95	8	18	95	8	18	140	8	.....	.....	.....	7–9	7–9	12–14	.....
Brown's Rock Island Business College	18	4	.....	23	18	15	.....	.....	15	75	6	15	75	6	15	125	6	.....	.....	.....	6	6	12	.....
Spark's Business College	35	40	25	75	10	15	.....	.....	12	.....	.....	12	.....	.....	12	.....	.....	.....	.....	.....	9	8	16	.....
Brown's Springfield Business College	35	56	85	311	20	35	.....	.....	15	[2] 85	6	15	[2] 85	6	15	[2] 125	6	.....	.....	.....	7	7	12	.....
Illinois Business College	65	19	25	206	23	12	.....	.....	12	120	5	12	120	5	.....	.....	.....	.....	.....	.....	10	10	.....	.....
Brown's Sterling Business College	5	2	9	87	56	84	.....	.....	15	85	5	15	85	5	15	120	.....	.....	.....	.....	7	7	.....	.....
Waukegan Business College	33	16	12	68	7	12	.....	.....	10	[2] 75	5	10	[2] 75	5	10	[3] 95	5	.....	.....	.....	10	8–10	12–18	.....
INDIANA.																								
Indiana Business College	18	42	10	50	15	46	.....	.....	12	60	5	12	60	5	12	110	5	.....	.....	.....	6	6	12	.....
Richmond Aurora Business College	15	12	9	37	3	9	.....	.....	10	50	5	10	50	5	13	90	5	.....	.....	.....	6–8	6–8	10–12	.....
Bedford Business University	2	4	3	26	5	10	.....	.....	.....	65	6	.....	65	6	.....	110	6	.....	.....	.....	6	6	12	.....
Brasil Business University	33	23	9	68	15	5	.....	.....	12	90	5	12	90	5	12	150	5	.....	.....	.....	9	9	15	.....

Columbus Business College	6	7	6	50	....	7	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Crawfordsville Business College	6	11	13	32	1	2	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Elkhart Business College	30	35	15	105	....	....	....	....	13	150	6	13	75	6	....	....	....	....	....	....	12	6	....	....
Lockyear's Business College	111	57	20	424	4	10	....	....	15	80	6	15	80	6	15	150	....	....	....	....	8	8	....	....
International Business College	85	30	35	265	175	500	....	....	15	75	4	15	75	4	15	135	4	....	....	....	6	6	10	....
Frankfort Business College	3	20	3	64	....	12	....	....	6	52	4	6	35	4	6	65	4	....	....	....	9	6	12	....
Central Business College	120	42	175	893	70	96	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Iles De Vor Commercial School	....	....	11	60	2	12	....	....	....	....	....	12	50	4	....	....	....	....	....	....	....	5–6	....	....
Clark School of Business	19	15	21	81	4	6	....	....	12	....	5	12	....	5	12	....	5	....	....	....	6	4–8	10–15	....
Kokomo Business College	20	7	12	108	3	6	....	....	12	60	5	12	60	5	12	110	....	....	....	....	6	6	12	....
La Fayette Business College	40	90	25	225	5	15	....	....	12	60	5	12	60	5	12	110	....	....	....	....	6	6	12	....
La Porte Business College	9	15	1	25	....	10	....	....	13	156	5	13	117	5	13	156	5	....	....	....	12	9	12	....
Indiana Business College	11	9	12	88	5	18	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Marion Business College	30	11	26	213	44	36	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
New Albany Business College	55	85	42	150	20	62	....	....	13	75	5	13	75	5	13	150	5	....	....	....	6	6	12	....
Indiana Business College	6	11	16	85	2	....	....	....	12	60	5	12	60	5	....	110	....	....	....	....	6	6	12	....
Noblesville Business College	....	....	....	....	4	46	....	....	....	....	....	....	....	....	12	[4] 66	....	....	....	....	....	....	8	....
Peru Business College	5	9	2	76	3	4	....	....	12	60	5	12	60	5	12	110	5	....	....	....	6	6	12	....
Richmond Business College	28	24	16	123	17	36	....	....	15	....	6	15	....	6	15	[3] 132	....	....	....	....	6	6	12	....
Seymour Business College	10	....	....	40	15	85	....	....	....	....	5	....	....	5	10	75	....	....	....	....	....	....	8	....
Kelley Business School	10	14	4	32	....	....	....	....	12	....	6	12	....	6	....	....	....	....	....	....	8	8	....	....
South Bend Business College	79	90	7	118	24	140	....	....	15	75	6	15	75	6	15	140	....	....	....	....	6–8	6–8	12–14	....
Thomas School of Stenography and Typewriting	....	1	13	84	....	....	....	....	....	60	....	....	70	6	....	....	....	....	....	....	5	6	....	....
Brown's Business College	50	90	45	186	24	40	....	....	15	85	5	15	85	5	15	125	....	....	....	....	7	7	12	....
Wabash Commercial School	90	65	35	190	6	40	....	....	13	80	5	13	80	5	13	120	....	....	....	....	7½	7½	12	....
Dodge's Telegraph Railway Accounting and Radio (Wireless) Institute	....	....	....	....	....	....	300	100	....	....	....	....	....	....	....	....	15	$60	....	....	....	....	....	6
Vincennes Business College	40	14	9	109	2	8	....	....	15	90	6	15	90	6	15	180	....	....	....	....	6	6	12	....
Washington Business College	9	3	11	45	....	....	....	....	12	60	5	12	60	5	....	....	....	....	....	....	6	6	....	....
IOWA.																								
Belle Plaine Business College	2	....	....	4	5	25	....	....	10	60	....	10	60	....	10	90	....	....	....	....	4–6	4–6	10–14	....
Cedar Rapids Business College	166	85	47	392	18	29	....	....	15	85	....	15	85	....	15	140	....	....	....	....	8–10	7–9	14–16	....
Chariton Business College	6	5	1	13	1	2	....	....	10	....	....	10	....	....	10	....	....	....	....	....	6–9	7½–9	12	....
Clinton Business College	24	8	8	65	16	48	....	....	15	85	5	15	85	5	15	120	5	....	....	....	7	7	12	....
Boyles Iowa College	51	37	30	187	5	25	....	....	7	50	4	7	50	4	7	90	4	....	....	....	6–8	6–8	12–15	....
Hammill College and Business Institute	29	45	22	165	....	....	....	....	7	50	4	7	50	4	....	....	....	....	....	....	6	6	....	....
Brown's Davenport Business College	58	10	40	150	75	50	....	....	13	75	5	13	75	5	13	120	5	....	....	....	6–9	6–9	12	....
Valder College	50	25	20	40	2	4	....	....	10	....	....	10	....	....	13	....	....	....	....	....	6	6	10	....
Capital City Commercial College	213	83	65	831	34	23	....	....	15	100	5	15	100	5	15	125	5	....	....	....	9	7	12	....
Bayless Business College	36	16	27	195	10	25	....	....	15	100	6	15	100	6	15	150	....	....	....	....	7½	7½	12	....
Fort Dodge Business College	9	7	1	24	9	67	....	....	10	....	....	10	....	....	10	....	....	....	....	....	9	7	9	....
Fort Madison Business College	35	10	20	65	30	40	....	....	12	85	....	12	85	7	12	140	....	....	....	....	8	7	14	....
Irish's Business College	32	18	10	106	....	....	....	....	15	[2] 80	....	15	[2] 80	....	....	....	....	....	....	....	9	9	....	....
Tri-State Commercial College	4	4	5	52	1	....	....	....	13	75	5	13	75	5	13	120	....	....	....	....	6	6	12	....
Hamilton's University of Commerce	73	240	26	192	40	228	....	....	13	87	....	13	75	....	13	100	....	....	....	....	12	7	15	....
Brown's Muscatine Business College	10	5	10	23	7	7	....	....	15	75	....	15	75	....	15	125	....	....	....	....	6	6	12	....
Oelwein Business College	16	....	4	130	3	16	....	....	12	....	5	12	....	5	....	....	....	....	....	....	....	....	....	....
Iowa Success School	20	13	5	162	5	5	....	....	13	90	6	13	90	6	15	150	....	....	....	....	9	9	18	....

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[1] Night school.

[2] If course is completed in prescribed time.

[3] Tuition fee for 1 year.

[4] Tuition fee for 6 months.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
IOWA—continued.																								
Ottumwa Commercial College	110	62	51	133	....	....	....	....	$10	$60	$5	$10	$60	$5	....	....	....	....	....	....	8	8	....	....
National Business Training School	83	104	32	373	25	100	....	....	15	75	5	15	75	5	$15	$110	....	....	....	....	9	9	12	....
Waterloo Business College	108	142	53	251	26	81	....	....	13	....	8	13	....	8	13	....	....	....	....	....	10	8	9–14	....
KANSAS.																								
Central Kansas Business College	86	15	40	38	25	2	....	....	10	50	....	10	50	....	12	85	....	....	....	....	6	6	8	....
Arkansas City Business College	27	12	7	49	20	35	....	....	10	110	5	10	110	5	10	....	....	....	....	....	7	6	12	....
Chanute Business College	9	1	21	109	15	12	....	....	15	75	6	15	75	6	15	125	$6	....	....	....	6	6	12	....
Coffeyville Business College	19	7	18	131	14	143	....	....	10	75	5	10	75	5	10	125	5	....	....	....	6–8	6–8	10–15	....
Concordia Normal and Business College	10	22	2	25	....	13	....	....	12	60	....	12	60	....	12	100	....	....	....	....	7	7	12	....
Emporia Business College	37	50	5	40	8	20	....	....	10	75	....	10	75	....	10	100	....	....	....	....	6–9	6–8	12–15	....
Fredonia Business College	1	....	9	72	11	11	....	....	12	60	....	12	60	....	15	90	....	....	....	....	5	5	8	....
Salt City Business College	45	85	20	150	217	815	....	....	15	96	7	15	96	7	15	158	7	....	....	....	6–8	6–8	10–12	....
Hazlett Institute of Business	5	19	12	16	3	6	....	....	13	....	....	13	....	....	13	....	....	....	....	....	....	....	....	....
Lawrence Business College	169	96	121	164	120	75	....	....	15	75	5	15	75	5	20	125	....	....	....	....	7–8	7–8	10–14	....
Leavenworth Business College	88	13	26	83	....	....	....	....	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Manhattan Business College	4	....	4	42	3	6	....	....	9	40	....	9	40	....	10	75	....	....	....	....	6	6	9	....
Newton Business College	11	15	18	37	3	4	....	....	10	....	5	10	....	5	10	....	....	....	....	....	9	9	15	....
Ottawa Business College	18	....	71	135	11	10	2	....	11	55	....	11	55	....	14	85	....	$11	$55	....	8	8	11	9
Parsons Business College	21	39	10	65	9	86	....	....	15	[1]60	6	15	[1]60	6	15	78	....	....	....	....	6	6	....	....
Kansas University of Commerce	45	32	100	172	115	292	12	12	15	75	....	15	75	....	15	125	....	15	75	....	8	7	12	5–6
Dougherty's Business College	12	6	29	220	10	6	....	....	10	50	4	10	50	4	10	85	4	....	....	....	6–8	6–8	8–12	....
Santa Fe Railway and Telegraph School	....	....	....	....	....	....	62	71	....	....	....	....	....	....	....	....	....	10	50	....	....	....	....	6
Topeka Business College	77	54	85	249	130	120	....	....	10	50	4	10	50	4	12	85	....	....	....	....	8	8	12	....

Dague Business Colllege	105	30	50	415	16	9			12	79	5	12	79	5	12	117					9	9	12–18	
Wichita Business College	235	205	105	345	225	105			14		6	14		6	14						9	6	15	
KENTUCKY.																								
Curtis Commercial College	50	64	64	88	18	23				50	4		50	4		90	4				6	6	12	
Danville Business School	2	48	5	53	2	9				35			40			75					6	5		
Fugazzi School of Business		13	21	300	10	250			10	25	5	10	45	5	10	65					3	5	6	
Bryant and Stratton Business College	87	71	45	354					15	115	5	15	115	5							6	10		
Clark School of Business	15	24	45	151	22	73			12	[2] 55	5	12	[2] 55	5	12		5				4	5	9	
Creager Business School	28	21	17	132	4	29			12	50	5	10	45	5	12	85					3–6	3–6	6–10	
Spencerian Commercial School	119	35	31	312	105	155			14		6	14		6	14	[1] 150					9	9	12	
LOUISIANA.																								
Baton Rouge Business College	50	50	35	165	10	25	1	3	12	75	5	12	75	5	12			4			4	4	8	4
Lake Charles Business College	15	5	16	123	23	19			10	60	8	10	57	8	15	90	10				3–5	3–5	5–7	
Guillaume College		1	2	95					5		3	5		3							3–6	3–6		
Reaser School	18	14	16	67					8	40	5										5–6			
Soulé Commercial College	433	67	346	614					([3])		7	11		6							6–12	8–9		
Twentieth Century School	1	2	2	71					8	24	5	8	40	5							3–4	4–5		
Draughon's Practical Business College	64	47	37	255	7	28			[4] 15	50	5	[4] 15	50	5	[4] 15	85					4–6	4–6	8–10	
MAINE.																								
Maine School of Commerce	24	14	8	40	6	23			10		5	10		5	10		5				5	6	8	
Shaw's Augusta Business College	28	2	4	45	2	1			13		6	13		6	13						6	7	11	
Beal Business College	8	14	6	49	1	7			13		5	13		5	13		5				6½	6½	9–10	
Doe Business College	5	6	5	24	5	7			10		4	10		4	10		4				7	7	12	
Bliss Business College	61	38	10	35					10	80	6	10	80	6							8	6–8		
Gray's Portland Business College	49	67	20	144	3	27			12			12			12						7–9	5–9	10	
Miss Sawyer's Shorthand School			1	35								12									7			
Shaw's Portland Business College [5]	184	57	31	335	14	230	33	30	13		6	13		6	13			13		$6	6	6	9	6
Rockland Commercial College	11	1		53					10			10									6–8	6–8		
Thornton Academy					52	105										40							30	
Thomas Business College	12	9	2	13	28	40			10	75	5	10	75	5	10	100	5				6–8	6–8	10–12	
MARYLAND.																								
American Shorthand School			4	20										5								7		
Calvert Business College			35	190								12	80	5							3–6			
Eaton and Burnett Business College	67	20	89	529	60	300			12		5	12		5										
Frederick City Night School	3	6	3	38							4			4										
Columbia College	34	21	28	114					10	60	4	10	60	4							9	9		
Beacom Business College	32	12	13	98					15		5	15		5							7	7		
MASSACHUSETTS.																								
Boston School of Telegraphy							77	193										10	75	6				6
Bryant and Stratton Commercial School	355	175	105	550					22		8	22		8							10	5–9		
Burrough's Adding Machine Company's School		195								50											3			

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[1] If course is completed in prescribed time.
[2] Tuition fee for 5 months.
[3] Tuition fee, $10 to $15 per month.
[4] Tuition reduced after first month.
[5] Includes one branch school.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
MASSACHUSETTS—continued.																								
Chandler School for Women			7	32	1	16						$20	$200	$4	$20	$200							10	
Clark School of Shorthand and Typewriting			89	353								15	185	6								9		
Franklin Academy			17	177								12		4										
Higgins Commercial Machine School [1]		500								$75	$4										2–3			
Pierce Shorthand and Secretariat School		50		100		50			$23	200		23	200		23	200					9–10	9–10	9–10	
Fall River School of Commerce			60	131								10	100	5								10		
Thibodeau Business College	59	32	29	58		2			10	100	5	10	100	5	10	100					8–10	8–10	20	
Greenfield Commercial School	15		3	71					11	100	4	11	100	4							12			
Lawrence Commercial School	41	82	25	108	2	6			14	140	6	14	150	6	14	230	$6				8	8	15	
Lynn Branch Burdett Business College	86	110			11	63				160	7					160	7				10		13	
Malden Commercial School	37	39	26	98	9	61	5	11	16		5	16		5	16			$16			8	8	14	
Benton's Business School	6	12	8	33					14	126	5	14	126	5							10	10		
Kinyon's Commercial and Shorthand School	28	42	21	82					[2] 35		[3] 40	[2] 35		[3] 40							6–8	6–8		
Northampton Commercial College	29	7	15	106					15	150	5	15	120	5							10	8		
Berkshire Business College	20	28	12	52	18	45			14		6	14		6	14						7	7	10	
Pittsfield Commercial School	20	20	10	71					12		4	12		4							6–8	6–8		
Bay Path Institute	26	24	37	238	29	127			15		5	15		5	15	150	5				6–8	6–8	10	
Springfield Civil Service & Commercial School	13	70	31	183	22	71			12	75	5	12	75	5	12	115					6–8	6–8	8–12	
Maltby School	2	3	16	55	1	4			12		4	12		4	12							10		
Bristol School	15	11	14	83	2	5			15	140	5	15	140	5							10	10	16	
Worcester Business Institute	62	106	56	428	13	71			16		5	16		5	16									
MICHIGAN.																								
Brown's Business University	40	4	3	40					8			8									8	8		
Alpena Business College	13	11	13	31	2	9			10		3	10		3	10		3							

Cornell Shorthand School	33	23	22	.....	.....	51	.....	.....	10	.....	5	10	.....	5	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Michigan Business and Normal College	12	8	8	42	28	60	.....	.....	15	[4] 65	.....	15	[4] 65	.....	15	.....	.....	.....	.....	.....	6–9	6–9	9–15	.....
Ferris Institute	100	162	140	306	.....	.....	60	15	10	75	.....	10	75	.....	.....	.....	.....	10	$75	.....	9	9	.....	.....
Business Institute	311	485	126	807	49	581	.....	.....	12	.....	5	12	.....	5	12	.....	5	.....	.....	.....	6	6	12	.....
Central Business College	26	8	19	122	20	28	.....	.....	10	.....	5	10	.....	5	10	.....	.....	.....	.....	.....	6	6	12	.....
Cloverland Commercial College	19	24	18	78	6	74	.....	.....	10	.....	5	10	.....	5	10	.....	5	.....	.....	.....	.....	.....	.....	.....
Baker Business University	200	90	5	325	.....	.....	.....	.....	10	75	4	10	75	4	.....	.....	.....	.....	.....	.....	6–8	6–8	.....	.....
Churchill's Business Institute	13	23	.....	.....	13	23	.....	.....	12	85	.....	.....	.....	.....	12	125	.....	.....	.....	.....	5–8	.....	8–12	.....
McLachlan Business University	90	210	136	350	158	300	.....	.....	15	100	5	15	100	5	15	150	5	.....	.....	.....	8	8	12	.....
Twin City Commercial College	24	10	6	64	.....	56	.....	.....	11	[5] 90	5	11	[6] 90	5	11	.....	.....	.....	.....	.....	10	.....	.....	.....
Actual Business College	12	5	.....	10	13	12	.....	.....	12	65	5	12	65	5	12	100	.....	.....	.....	.....	6–12	6–12	.....	.....
Ironwood Business College	14	21	20	63	7	19	.....	.....	10	85	5	10	85	5	10	85	.....	.....	.....	.....	8–10	8–10	10	.....
Ishpeming Business College	6	15	8	30	7	12	4	.....	10	.....	5	10	.....	5	10	5	5	10	.....	$5	8	8	12	4
Allen's Business College	9	6	6	92	.....	4	.....	.....	10	.....	3	10	.....	3	10	.....	.....	.....	.....	.....	6–10	.....	8–10	.....
Jackson's Business University	10	15	80	5	25	.....	.....	.....	10	68	.....	10	68	.....	10	.....	.....	.....	.....	.....	7	7	.....	.....
Maher's Business College	26	12	1	75	10	.....	.....	.....	10	50	5	10	50	5	10	110	5	.....	.....	.....	6	6	10	.....
Carson's Business College	23	19	23	139	34	35	.....	.....	12	[5] 100	6	12	[5] 100	6	12	.....	.....	.....	.....	.....	9	9	15	.....
Lansing Business University	54	25	12	143	19	35	.....	.....	15	85	.....	15	85	.....	15	140	.....	.....	.....	.....	9	9	15	.....
Laurium Commercial School	15	38	10	169	6	15	7	5	11	[6] 85	5	11	[6] 85	5	11	.....	5	11	.....	5	10	10	18	6
Ludington Business College	6	5	5	39	.....	.....	.....	.....	10	.....	4	10	.....	4	.....	.....	.....	.....	.....	.....	6–8	9–10	12–15	.....
Manistee Business College	2	1	13	57	2	2	.....	.....	10	.....	5	10	.....	5	10	.....	.....	.....	.....	.....	6–9	6–9	6–9	.....
Marquette Business College	16	15	22	58	.....	.....	.....	.....	10	60	5	10	60	5	.....	.....	.....	.....	.....	.....	4–6	6–8	.....	.....
Monroe Business University	24	7	27	77	.....	.....	.....	.....	12	75	5	12	75	5	.....	.....	.....	.....	.....	.....	8	8	.....	.....
The Business Institute	13	13	5	28	2	11	.....	.....	10	.....	5	10	.....	5	.....	.....	.....	.....	.....	.....	6–8	6–8	10–12	.....
Muskegon Commercial College	.....	87	.....	68	.....	20	.....	.....	12	87	.....	12	87	.....	12	100	.....	.....	.....	.....	4–6	5–8	10–12	.....
Owosso Business College	33	4	.....	36	.....	1	.....	.....	10	65	.....	10	65	.....	10	105	.....	.....	.....	.....	9	9	18	.....
Port Huron Business College	28	26	35	17	10	39	.....	.....	13	80	5	13	80	5	13	120	.....	.....	.....	.....	7	6	10	.....
MINNESOTA.																								
Albert Lea Commercial College	41	21	6	76	19	27	.....	.....	15	85	7	15	85	7	15	100	7	.....	.....	.....	9	9	12–15	.....
University of Southern Minnesota	40	25	6	63	12	36	20	32	10	80	.....	10	80	.....	12	90	.....	10	$50	.....	12	10	15	8
Bemidji Business College	1	.....	1	8	.....	9	.....	.....	15	100	8	15	100	8	15	100	.....	.....	.....	.....	9	9	9	.....
Crookston College	62	5	17	42	10	3	.....	.....	15	150	7	15	150	7	15	150	.....	.....	.....	.....	6–12	6–12	9–18	.....
Hughes Business College	5	50	4	51	5	50	.....	.....	10	[5] 50	.....	10	[5] 50	.....	10	.....	.....	.....	.....	.....	6	6	6–9	.....
Central Business College	43	39	26	129	11	28	.....	.....	12	[5] 65	5	12	[5] 65	5	12	[7] 110	.....	.....	.....	.....	6	6	10–12	.....
Duluth Business University	20	180	61	413	.....	.....	.....	.....	12	65	5	12	65	5	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Parsons Business University	9	3	10	9	3	4	.....	.....	10	60	5	10	60	5	10	60	.....	.....	.....	.....	6	6	12	.....
Mankato Business and Commercial College	670	460	.....	.....	.....	.....	.....	.....	12	70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6–9	.....	.....	.....
American Business College	108	15	25	183	15	50	.....	.....	16	[6] 115	5	16	[6] 115	5	16	[7] 165	.....	.....	.....	.....	6–8	6–8	12–16	.....
American Telegraph College	.....	.....	.....	.....	.....	.....	58	291	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	70	5	.....	.....	.....	4
Barry's Telegraph Institute	.....	.....	.....	.....	.....	.....	70	82	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	75	5	.....	.....	.....	4–6
Collegiate Business Institute	.....	.....	.....	.....	1	150	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	125	.....	.....	.....	.....	6
Gregg Shorthand School	.....	.....	.....	64	.....	.....	.....	.....	.....	.....	.....	15	70	.....	.....	.....	.....	.....	.....	.....	.....	4–7	.....	.....
Hillman Shorthand School	3	17	.....	.....	.....	.....	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3–6	.....	.....	.....
Humboldt College	24	19	19	76	5	29	.....	.....	12	85	5	12	85	5	12	125	.....	.....	.....	.....	6–9	6–9	12	.....
Minneapolis Business College	235	65	115	408	.....	.....	.....	.....	15	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	8	8	.....	.....
Minnesota College	53	34	11	98	20	43	.....	.....	10	60	5	10	60	5	10	60	.....	.....	.....	.....	9	9	9	.....
Munson Shorthand School	.....	.....	6	32	.....	.....	.....	.....	.....	.....	.....	15	75	.....	.....	.....	.....	.....	.....	.....	.....	4–6	.....	.....
Northwestern Business College	36	248	20	249	10	66	.....	.....	10	50	5	10	50	5	10	75	5	.....	.....	.....	6	6	9	.....

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[1] Commercial course in labor-saving machinery.

[2] Tuition fee for 10 weeks.

[3] Tuition fee for 38 weeks.

[4] Tuition fee for 6 months.

[5] If course is completed in time prescribed.

[6] Tuition fee for 10 months.

[7] Tuition fee for 1 year.

ABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
MINNESOTA—continued.																								
Canfield School	18	9	7	30	.....	.....	.....	.....	$15	[1]$100	$5	$15	[1]$100	$5	.....	.....	.....	.....	.....	.....	6–12	6–12	.....	.....
St. Cloud Business College	34	10	3	22	16	38	.....	.....	12	55	.....	12	55	.....	$12	$55	.....	.....	.....	.....	6	6	12	.....
Globe Business College	65	34	51	204	12	55	.....	.....	12	65	6	12	65	6	12	120	$6	.....	.....	.....	6	6	12	.....
Lancaster Business Institute	65	94	59	142	33	76	.....	.....	12	.....	5	12	.....	5	12	.....	5	.....	.....	.....	8	8	.....	.....
Pioneer Business School	29	88	17	133	.....	.....	.....	.....	12	.....	6	12	.....	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Rasmussen St. Paul Practical Business School	120	30	40	470	20	100	.....	.....	15	[2] 80	.....	15	[2] 80	.....	15	.....	.....	.....	.....	.....	6–12	6–9	14	.....
Rasmussen Stillwater Practical Business School	15	11	13	23	10	14	.....	.....	10	.....	5	10	.....	5	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Willmar Seminary	31	10	13	45	7	8	.....	.....	6	51	.....	6	51	6	6	102	.....	.....	.....	.....	8½	8½	17	.....
Winona Business College	28	13	4	66	41	167	6	22	12	140	5	12	70	5	12	140	5	.....	.....	$5	12–14	6–8	12–14	.....
MISSISSIPPI.																								
Hattiesburg Business College	3	10	10	25	2	10	.....	.....	12	50	.....	12	50	.....	12	85	.....	.....	.....	6	5–6	9–12	.....	.....
Draughon's Practical Business College	68	42	40	250	15	35	.....	.....	15	50	5	15	50	5	18	80	5	.....	.....	.....	5	5	8	.....
MISSOURI.																								
Dunkles Business School	60	25	.....	30	.....	.....	.....	.....	8	.....	4	8	.....	4	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Cape Girardeau Business College	79	13	22	188	30	2	18	11	10	60	4	10	65	4	10	100	.....	$10	$60	4	6	7	11	6
Business School	.....	3	4	31	1	12	.....	.....	5	30	3	5	50	3	5	75	.....	.....	.....	.....	8	6	11	.....
Rude's Business School	27	23	4	107	16	28	.....	.....	10	60	5	10	60	5	10	100	5	.....	.....	.....	8	8	12	.....
Chillicothe Business College	175	250	108	592	225	630	176	104	15	75	.....	15	75	.....	15	110	.....	15	75	.....	6	6	10	6
Jackson University of Business	35	29	27	39	31	38	.....	.....	.....	75	.....	.....	75	.....	.....	100	.....	.....	.....	.....	6	6	8	.....

De Soto Business College	9	3	10	50	9	3	.....	.....	13	66	5	13	66	5	13	120	.....	.....	.....	.....	6	6	10	.....
Ozark Business College	10	3	8	49	19	18	.....	.....	13	75	.....	13	75	.....	13	125	.....	.....	.....	.....	7	7	11	.....
Huff's School of Expert Business Training	40	65	115	976	.....	.....	.....	.....	15	.....	5	15	.....	5	.....	.....	.....	.....	.....	.....	7	7½-8	.....	.....
Kansas City Business College	38	99	59	470	42	131	.....	.....	12	[2] 60	6	12	[2] 60	6	15	[2] 75	8	.....	.....	.....	6-9	6-9	6-9	.....
Powell's Shorthand School	.....	.....	2	14	.....	.....	.....	.....	.....	.....	.....	10	60	5	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Moberly Commercial College	7	1	18	76	7	2	.....	.....	17	65	6	17	65	6	17	100	6	.....	.....	.....	5	4	7	.....
Nevada Business College	28	37	26	79	15	25	.....	.....	[3] 15	67	5	[3] 15	67	5	[3] 15	113	.....	.....	.....	.....	6	6	12	.....
St. Joseph Business University	66	19	45	260	10	40	.....	.....	12	[2] 65	6	12	[2] 65	6	12	110	.....	.....	.....	.....	6-9	6-9	10-15	
St. Joseph Commercial College	.....	.....	.....	.....	155	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	180	.....	.....	.....	.....	.....	.....	30	.....
Barnes Business College	21	29	50	140	2	8	.....	.....	13	[2] 65	5	13	[2] 65	5	13	110	8	.....	.....	.....	6-9	6-9	12-16	.....
Brown's St. Louis Business College	10	4	40	103	20	61	.....	.....	10	60	5	10	60	5	10	80	.....	.....	.....	.....	6	6	8-10	.....
Do	20	38	28	130	30	56	.....	.....	12	75	7	12	75	7	12	120	7	.....	.....	.....	6-7	4-6	8-10	.....
Do	40	10	48	103	28	13	.....	.....	12	75	7	12	75	7	12	125	7	.....	.....	.....	6-9	6-7	12	.....
Jones Commercial College	50	65	40	150	50	35	.....	.....	13	75	7	13	75	7	15	125	.....	.....	.....	.....	6	6	12	.....
Sanguinet Shorthand School	.....	.....	.....	93	.....	.....	.....	.....	.....	.....	.....	13	.....	6	.....	.....	.....	.....	.....	.....	.....	4-5	.....	.....
Southwestern Railroad Telegraph School	.....	.....	.....	.....	.....	.....	13	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	5	.....	.....	.....	5
Union Electric Telegraph School	.....	.....	.....	.....	.....	.....	75	140	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	75	10	.....	.....	.....	3-6
Draughon's Practical Business College	54	21	120	416	24	20	.....	.....	15	70	5	15	70	5	15	100	5	.....	.....	.....	5	6	10	.....
Springfield Business College	140	210	200	300	340	510	300	.....	.....	60	.....	.....	60	.....	.....	60	.....	.....	60	.....	6	6	9-10	6
West Plains Business College	5	6	10	.....	10	6	.....	.....	7	.....	6	7	.....	6	7	.....	6	.....	.....	.....	.....	.....	.....	.....
MONTANA.																								
Billings Business College	80	65	26	215	10	75	5	25	15	75	6	15	75	6	15	125	.....	15	75	.....	6	6	10-12	6
Bozeman Business College	8	5	7	50	.....	.....	.....	.....	15	100	6	15	100	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Great Falls Commercial College	90	40	50	350	.....	25	.....	.....	15	90	8	15	90	8	15	175	8	.....	.....	.....	9	9	18	.....
Helena Business College	37	102	13	273	.....	.....	.....	.....	15	70	6	15	70	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Fergus Business College	8	.....	.....	66	.....	.....	.....	.....	15	100	8	15	100	8	.....	.....	.....	.....	.....	.....	6	8	.....	.....
Missoula Business and Normal College	23	15	12	70	4	12	.....	23	15	100	8	15	100	8	18	175	.....	15	.....	.....	8-10	8-9	15	.....
NEBRASKA.																								
Cotner Commercial College	7	.....	.....	3	.....	1	.....	.....	8	.....	.....	8	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Northwestern Business College	4	2	1	10	5	26	.....	.....	15	85	.....	15	85	.....	15	100	.....	.....	.....	.....	6	6	9-15	.....
Fremont College	.....	.....	.....	.....	89	372	.....	.....	.....	.....	.....	.....	.....	.....	.....	60	.....	.....	.....	.....	.....	.....	6	.....
Hastings Business College	15	3	7	18	45	49	.....	.....	10	80	.....	10	80	.....	10	125	.....	.....	.....	.....	7-9	6-9	9-14	.....
Lincoln Business College	43	143	125	405	16	38	.....	.....	.....	[2] 75	.....	.....	[2] 75	.....	.....	[2] 125	.....	.....	.....	.....	6-9	6-9	9-12	.....
Nebraska School of Business	14	12	52	288	14	35	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7-9	6-9	9-12	.....
McCook Business College	.....	.....	4	18	.....	.....	.....	.....	.....	.....	.....	.....	75	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Norfolk Business College	4	19	.....	241	6	.....	.....	.....	10	75	5	10	75	.....	10	125	.....	.....	.....	.....	14	.....	.....	.....
Boyles Commercial College	120	43	158	713	51	70	61	17	15	([4])	6	15	([4])	.....	15	110	6	15	65	6	6-8	6-8	12-15	4-6
Van Sant School of Business	.....	19	6	320	.....	160	.....	.....	15	.....	.....	15	.....	8	15	.....	.....	.....	.....	.....	5	7	8	.....
St. Paul Normal and Business College	8	11	6	15	18	17	.....	.....	10	90	3	10	90	3	10	125	3	.....	.....	.....	9	9	11	.....
York College School of Commerce	80	101	40	80	.....	.....	.....	.....	15	120	.....	15	90	.....	.....	.....	.....	.....	.....	.....	9	6	.....	.....
NEVADA.																								
Reno Business College	5	26	20	109	3	21	.....	.....	13	.....	6	13	.....	6	13	.....	6	.....	.....	.....	6-8	6-8	10-12	.....

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[1] Tuition fee for 1 year.
[2] Tuition fee for 6 months.
[3] Tuition fee reduced after first month.
[4] Tuition, $65 to $80.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
NEW HAMPSHIRE.																								
Dover Business College					55	64									$22								10	
Bryant-Stratton Business College	121	46	33	262		15	17	13	$10		$4	$10		$4	10		$4	$10		$4	8-10	8-10	12-15	6-8
Hesser Business College	67	39	22	65					10		4	10		4							10	10		
New Hampshire Literary Institution and Commercial College	9	10	6	13	15	23				$130			$36			$160								
NEW JERSEY.																								
Atlantic City Business College		13	54	164					10		5	10	90	5							3-6	6-9		
Drake Business College	8	3	28	147	20	65			10		4	10		4	10		4							
Heimbach's Bridgeton Commercial School	26	12	9	51	9	15			15		5	15		5	15		5				5-10	5-10	10-18	
Camden Commercial College	84	86	175	436	18	52			16		6	16		6	16		6				6-9	6-9	12-18	
Dover Business College	12		18	46	25	50			10	90	6	10	100	6	10	100	6				10	10	10	
Drake College	15	30	20	170					13		5	13		5							6	5		
Donovan Business College	24	80	20	65					10		5	10		5							8-10	10-12		
Lightfoot's Stenographic Institute			110	993								8	64	4								8		
Drake's Newark College	85	80	330	675	35	45			13		5	13		5	13		5				6	6	10-15	
New Jersey Stenographers' Exchange				187					8					4										
Seymour Commercial and Shorthand School			9	21								12	125	6										
New Brunswick Business College	31	9	30	154	10	25			13		6	13		6	13		6				7-10	7-10	14-20	
Drake's Passaic Business College	177	128	45	172	135	105			12		5	12		5	12		5				6-8	6-9	12-15	
Drake Paterson Business College			100	202	240	205						12		5								6-10	10-18	
Phillips School			4	15	4	13						6	60	3	6	60	3					12-18		
Spencer's Business College	33	23	32	27	273	161			10	150	4	10	150	4	10	150	4							
Trainer's Business College	45	34	42	251					12	[1]60	5	12	[1]60	5							6-8	6-8		

Heimbach's Trenton Business School	13	3	19	92	3	7	....	....	14	[2] 140	5	14	[2] 140	5	14	[2] 140	5	....	....	....	6-12	5-8	12-18	....
Rider-Moore and Stewart School	280	170	170	320	173	410	....	....	16	....	6	16	....	6	16	....	6	....	....	....	10	8	10	....
Vineland Business School	11	24	22	119	4	23	....	....	15	....	6	15	....	6	15	....	6	....	....	....	6-9	5-9	7-12	....
NEW MEXICO.																								
Albuquerque Business College	43	22	14	65	10	76	....	....	18	....	6	18	....	6	18	....	6	....	....	....	6-12	6-12	6-12	....
Standard Business School	10	25	10	77	20	112	....	....	7	....	7	7	....	7	12	....	12	....	....	....	....	....	....	....
NEW YORK.																								
Albany Business College	155	49	227	646	47	40	....	....	15	....	5	15	....	5	15	[2] 125	....	....	....	....	6-7	6-7	10-12	....
Comfort School of Stenography	....	....	5	40	....	....	....	....	....	....	....	7	....	....	....	....	....	....	....	....	....	7-8	....	....
Reynolds Business School	23	10	12	24	43	36	....	....	9	....	4	9	....	4	9	....	4	....	....	....	5-7	6-8	8-10	....
Auburn Business School	27	26	6	53	....	....	....	....	10	....	5	10	....	5	....	....	....	....	....	....	8-10	8-10	....	....
Williams School	....	....	1	34	....	....	....	....	....	....	....	10	75	5	....	....	....	....	....	....	....	6	....	....
Blount's Business School	2	12	1	51	....	10	....	....	10	30	....	12	60	....	14	90	....	....	....	....	3	5	8	....
Binghamton School of Business	12	17	18	113	7	16	....	....	10	60	5	10	55	5	10	100	5	....	....	....	6	6	....	....
Lowell School of Business	39	52	33	265	6	37	....	....	13	83	5	13	83	5	13	110	5	....	....	....	7-9	7-9	12-14	....
Alpha School of Business	95	45	30	150	35	145	....	....	10	60	5	10	60	5	10	100	5	....	....	....	7-8	6-7	10-12	....
Avon School of Secretaries	8	1	8	94	3	17	....	....	12	....	6	12	....	6	12	....	6	....	....	....	3	4	9	....
Browne's Business College	206	92	437	1,161	9	12	36	9	12	....	5	12	....	5	12	....	5	12	....	5	....	....	....	....
Curtis Business School	....	....	19	44	....	5	....	....	....	....	....	10	....	6	12	....	....	....	....	....	....	6-8	8-10	....
Euclid School	....	....	....	....	300	900	....	....	....	....	....	....	....	....	12	....	5	....	....	....	....	....	7-12	....
Excelsior Business School	75	80	125	175	85	185	....	....	10	75	5	10	75	5	10	125	....	....	....	....	6	7	12	....
Heffley Greenpoint School	68	98	111	186	....	....	....	....	12	48	5	12	96	5	....	....	....	....	....	....	5	8	....	....
Heffley Institute	130	141	327	942	....	....	....	....	12	....	5	12	....	5	....	....	....	....	....	....	8	8	....	....
Lamb's Business Training School	90	110	65	220	....	....	....	....	10	....	5	10	....	5	....	....	....	....	....	....	6-12	6-8	....	....
Long Island Business School	61	19	62	289	22	85	....	....	10	....	5	10	....	5	10	....	....	....	....	....	6-8	5-7	7-10	....
Miner's Business Academy	19	11	44	239	10	38	....	....	12	....	5	12	....	5	12	....	5	....	....	....	6-8	6-8	8-12	....
Mockridge Business School	43	34	80	100	44	78	....	....	10	65	5	10	65	5	10	110	5	....	....	....	6	6	12	....
People's Business School	25	445	25	105	50	550	....	....	10	65	5	10	65	5	10	90	5	....	....	....	6	6	9	....
Wood's Business School	55	52	175	365	34	185	....	....	12	70	5	12	70	5	12	115	5	....	....	....	6	6	12	....
Chown School of Business	8	25	40	216	11	91	....	....	10	....	5	10	63	5	10	108	5	....	....	....	5	7	12	....
M. A. Burns School of Shorthand	....	....	11	74	....	....	....	....	....	....	....	10	60	6	....	....	....	....	....	....	....	6	....	....
Cortland Business Institute	....	....	19	70	....	....	....	....	....	....	....	12	64	....	....	....	....	....	....	....	....	6-8	....	....
Meeker's Business Institute	15	52	48	168	12	41	....	....	[4] 15	85	....	[4] 15	85	....	[4] 15	....	....	....	....	....	7	7	14	....
Gloversville Business School	40	60	8	40	....	....	....	....	11	66	4	11	66	4	....	....	....	....	....	....	6	6	....	....
Hempstead Business School	6	22	4	103	2	30	....	....	10	....	6	10	....	6	10	....	6	....	....	....	....	....	....	....
Jamestown Business College	30	64	17	122	25	61	....	....	12	70	....	12	75	....	12	120	....	....	....	....	7	7	13	....
Moran Business School	30	9	30	49	11	6	....	....	10	[1] 50	4	10	[1] 50	4	10	....	....	....	....	....	6	6	12	....
Spencer's Business School	45	12	.45	138	10	5	....	....	10	75	4	10	75	4	10	95	4	....	....	....	6-8	6-8	6-8	....
Bettinger Business Institute	20	35	5	15	20	35	....	....	10	....	5	10	....	5	....	....	....	....	....	....	6-7	6-7	....	....
Lockport Business Institute	....	....	35	65	....	....	....	....	....	....	....	10	....	5	....	....	....	....	....	....	....	6-12	....	....
Middletown School of Commerce	11	12	15	25	4	12	....	....	8	80	5	....	....	5	8	80	5	....	....	....	10	....	....	....
Ramsdell School	8	13	3	29	....	....	....	....	10	....	....	10	....	....	10	....	....	....	....	....	....	6-8	6-8	....
Sherman's Business School	8	12	40	173	13	23	....	....	15	....	6	15	....	6	15	....	6	....	....	....	....	....	....	....
Elms Commercial School	4	....	6	18	6	30	....	....	10	....	4	10	....	4	10	....	4	....	....	....	4	5-6	7-9	....
Brandon-Stevens Institute	32	23	34	145	8	20	....	....	12	....	6	12	....	6	12	....	6	....	....	....	5-6	7-9	12-15	....
Spencerian Business School	25	7	30	172	87	47	....	....	10	86	4	10	86	4	10	100	5	....	....	....	....	....	....	....
Westchester Commercial School	30	12	24	146	26	27	....	....	12	....	5	12	....	5	12	....	5	....	....	....	8	6	14	....

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[1] Tuition for 6 months.

[2] Tuition for 1 year.

[3] Tuition for 10 months.

[4] Tuition reduced after third month.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
NEW YORK—continued.																								
Accountants and Secretaries Business School	2	10		46	2	6			$10	$75	$5	$10	$75	$5	$10	$100					6	6	10	
Audubon Commercial School			15	85	10	40						12	65	5	12	75	$5					6	10	
Bird's Business Institute	215	115	70	975	5	20			10		5	10		5	10		5				6	6		
Bronx Business Institute	24	22	30	281	35	52			10	50	5	10	50	5	10	75	5				6	6	9	
Bronx Commercial School	27	30	76	317	96	219			10	[1] 55	5	10	[1] 55	5	10	[2] 100	5				4–6	6	9–10	
Miss Conklin's Secretarial School				225									150									6		
Eastman-Gaines School	175	125	250	650					15		5	15		5							7–9	7–9		
Gaffey's Business School			439									10	25									3		
Institute of Commerce	20	15	34	42		4			15	75	6	15	100	6	15	100	6				4	4	8	
Kimball Business School	42	98	82	198					10		5	10		5							7	7		
Merchants' and Bankers' Business School	325	225	275	575	85	65			14		5	14		5	14		5				6–9	6–9	12–18	
Metropolitan School of Business	7	14	26	53	1				10		5	10		5	10		5				5–7	5–7	11	
Miller School	120	200	21	1,200					14		5	14		5							7–8	7–8		
Moon's Business School	35	124								60		5									1–½			
Moon's Shorthand and Secretarial School			50	200									75									1–1½		
Mull's School	7	8	14	34	2	14			12		6	12		6	12		6							
New York Academy	2	1	3	10	22	40			8		6										7			
New York Commercial School	11	45	25	304	1	10			12		5	12		5	12		5				6	6	12	
New York School of Accounts	29	2								75											6			
Packard Commercial School	304	197	119	601					18	180	6	18	180	6							10	7		
Paine Uptown Business School	37	23	83	214			26	11	12	60	6	12	60	6				$10		$5	5–7	5–7		4–
Shulman School	57	35	55	134	90	82			10	50	5	10	50	5	10	75	5				6	6	12	
Tremont Business School	40	40	160	80	35	120			10	50	5	10	50	5	10	75	5				9	6	9	
Walworth Business Institute	18	13	27	121	11	25			18	[3] 50	6	18	[3] 50	6	18	[3] 50	6				6–8	6–8	12	
Ogdensburg Business College	12	8	9	49					10	[4] 55	4	10	[4] 55	4							6	6		

Chaffee's Business School	11	38	44	63	.....	.....	.....	.....	10	.....	4	10	.....	4	.....	.....	.....	.....	.....	.....	3	6-8	.....	.....
Peekskill Business College	40	35	65	70	45	68	.....	.....	10	.....	6	10	.....	6	12	.....	6	.....	.....	.....	6-8	6-8	8	.....
Mae J. Shannon Shorthand School	.....	.....	10	55	.....	.....	.....	.....	.....	.....	.....	12	.....	[5] 1	.....	.....	.....	.....	.....	.....	.....	6-8	.....	.....
Williams and Rogers Rochester Business Institute	339	223	136	813	10	54	.....	.....	13	.....	4	13	.....	4	13	.....	4	.....	.....	.....	6-8	6-8	12-14	.....
Spencer's Business School	45	35	10	80	.....	.....	.....	.....	12	80	5	12	75	5	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Southold Academy	11	.....	4	15	.....	.....	.....	.....	.....	20	.....	.....	20	.....	.....	.....	.....	.....	.....	.....	10	10	.....	.....
Baker Business School	.....	.....	11	198	.....	20	.....	.....	.....	.....	.....	10	65	5	.....	.....	.....	.....	.....	.....	.....	7	10	.....
Central City Business School	198	90	119	855	100	130	.....	.....	12	65	5	12	65	5	12	100	5	.....	.....	.....	6	6	12	.....
Richardson Commercial School	2	6	.....	.....	.....	.....	.....	.....	12	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
Troy Business College	215	175	57	325	11	31	.....	.....	13	75	4	13	75	4	13	75	.....	.....	.....	.....	7	7	14	.....
Excelsior School of Business	24	25	10	88	.....	6	.....	.....	10	.....	5	10	.....	5	10	.....	5	.....	.....	.....	8	8	12	.....
Private Shorthand School	.....	.....	.....	50	.....	.....	.....	.....	10	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5-8	.....	.....
Hall's Business School	8	7	30	104	14	37	.....	.....	12	84	5	12	84	5	12	84	.....	.....	.....	.....	7	7	.....	.....
NORTH CAROLINA.																								
Emanuel Business College	22	100	10	140	22	128	.....	.....	13	75	.....	10	85	.....	13	118	.....	.....	.....	.....	4	8	8	.....
Bines Creek Academy	19	6	2	17	2	6	.....	.....	5	23	.....	5	.....	.....	6	23	.....	.....	.....	.....	6	5	10-11	.....
Brown's Business College	20	30	15	70	10	50	.....	.....	15	60	.....	15	60	.....	19	75	.....	.....	.....	.....	4	4	4	.....
King's Business College	23	8	23	12	30	54	.....	.....	12	60	5	12	60	5	.....	.....	.....	.....	.....	.....	6	6	10	.....
Durham Business School	35	16	29	87	10	15	4	5	12	60	6	12	60	6	16	90	8	.....	.....	6	10	10	15	10
National Training School	3	4	2	5	2	4	.....	.....	6	44	.....	5	36	.....	.....	40	.....	.....	.....	.....	8	8	8	.....
Pool's School	.....	.....	2	14	.....	.....	.....	.....	.....	.....	.....	15	40	5	.....	.....	.....	.....	.....	.....	.....	6-9	.....	.....
King's Business College	113	54	46	196	34	38	.....	.....	15	60	5	15	60	5	15	90	.....	.....	.....	.....	6	6	10	.....
NORTH DAKOTA.																								
Bismarck Business College	41	13	12	58	17	32	.....	.....	15	100	10	15	100	10	15	150	10	.....	.....	.....	12	12	18-24	.....
Aaker's Fargo Business College	38	15	9	98	39	41	.....	.....	15	110	.....	15	90	.....	15	125	.....	.....	.....	.....	6-9	6-7	9-12	.....
Aaker's Grand Forks Business College	57	13	30	54	15	13	.....	.....	15	100	8	15	100	8	15	125	8	.....	.....	.....	6-9	6-9	9-18	.....
Union Commercial College	130	20	.....	60	10	20	.....	.....	.....	[1] 75	.....	.....	[1] 75	.....	.....	[6] 90	.....	.....	.....	.....	6	.....	9-12	.....
Minot College of Commerce	.....	.....	.....	.....	22	103	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
OHIO.																								
Actual Business College	129	57	53	275	.....	.....	.....	.....	13	75	5	13	75	5	.....	.....	.....	.....	.....	.....	7-8	7-8	.....	.....
Hammel Business College	86	49	35	78	19	33	.....	.....	12	65	6	12	70	6	12	115	6	.....	.....	.....	7-8	6-7	12-15	.....
Alliance Business College	20	25	8	65	6	18	.....	.....	12	85	5	12	85	5	12	135	5	.....	.....	.....	8	7	.....	.....
Ashtabula Business College	26	34	18	42	15	16	.....	.....	13	75	5	13	75	5	13	125	5	.....	.....	.....	9	9	18	.....
Cambridge Business College	19	31	11	81	1	14	.....	.....	15	75	5	15	75	5	15	75	5	.....	.....	.....	6-10	6-10	10-14	.....
Canton Actual Business College	175	60	25	290	23	20	.....	.....	12	70	5	12	70	5	12	125	5	.....	.....	.....	8	8	14	.....
Campbell Commercial School	25	53	68	436	1	24	.....	.....	15	65	6	15	65	6	15	120	6	.....	.....	.....	5	5	5	.....
Conroy Business School	3	11	7	73	.....	8	.....	.....	9	50	4	9	50	4	.....	100	.....	.....	.....	.....	6	6	11	.....
Littleford's School	24	72	31	286	1	28	.....	.....	15	80	7	15	80	7	15	125	7	.....	.....	.....	6	6	12	.....
Miller School of Business	72	95	139	415	65	154	.....	.....	15	80	6	15	80	6	15	125	6	.....	.....	.....	6	6	10	.....
Nelson Business College	48	60	39	378	52	172	.....	.....	12	60	5	12	60	5	12	100	5	.....	.....	.....	6	6	10	.....
Williams Private Shorthand School	.....	.....	50	96	.....	.....	.....	.....	.....	.....	.....	.....	66	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Boyd Business School	12	35	20	138	2	5	.....	.....	.....	45	.....	.....	55	.....	.....	80	.....	.....	.....	.....	3	3	6	.....
Cleveland Business University	139	211	135	243	98	201	.....	.....	10	.....	5	10	.....	5	10	.....	5	.....	.....	.....	6	6	13	.....
Dyke School of Business	60	35	34	309	17	45	.....	.....	[7] 20	116	[8] 7	[7] 20	132	[8] 7	[7] 20	244	[8] 7	.....	.....	.....	7	8	15	.....

[1] Tuition fee for 6 months.
[2] Tuition fee for 1 year.
[3] Tuition for 3 months.
[4] Tuition for 6 months.
[5] Tuition feo for 1 hour.
[6] Tuition fee for 9 months.
[7] Fee reduced after first month.
[8] Fee reduced after second month.

ABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
OHIO—continued.																								
Lane Business School	4	3	14	189	.....	.....	.....	.....	$10	.....	$5	$10	.....	$5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio Business College	1	1	30	65	45	110	.....	.....	12	$90	5	12	$90	5	$12	$90	$5	.....	.....	.....	6	7	13–14	.....
Bliss Business College	189	315	73	515	146	300	.....	.....	20	120	10	20	100	10	20	200	10	.....	.....	.....	6	4–6	10–12	.....
Columbus Business College	10	30	5	40	38	330	.....	.....	15	100	.....	15	100	.....	15	185	.....	.....	.....	.....	6	6	12	.....
Mann's Business Training School	30	40	30	190	.....	10	.....	.....	15	75	5	15	75	5	15	150	5	.....	.....	.....	6	6	12	.....
Office Training School	50	125	75	450	6	6	.....	.....	15	75	8	15	75	8	15	150	8	.....	.....	.....	6	6	10–12	.....
Zanerian College of Penmanship	[1] 10	[1] 50	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Conneaut Business College	1	1	.....	10	5	4	.....	.....	.....	90	[2] 15	.....	90	[2] 15	25	150	[2] 15	.....	.....	.....	3	6	12	.....
Miami Jacobs Commercial College	144	90	156	548	80	129	.....	.....	15	.....	7	15	.....	7	15	.....	.....	.....	.....	.....	6–8	6–8	10–12	.....
Elyria Business College	40	97	8	60	8	60	.....	.....	10	.....	5	10	.....	5	.....	.....	.....	.....	.....	.....	7	6	.....	.....
Greenfield Business College	14	12	12	38	9	16	.....	.....	15	60	8	15	60	8	15	90	.....	.....	.....	.....	6	6	12	.....
Commercial Normal College	14	4	1	53	.....	.....	.....	.....	12	84	5	12	84	5	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Hamilton Business College	44	49	17	169	.....	10	.....	.....	10	.....	5	10	.....	5	10	.....	5	.....	.....	.....	6	.....	.....	.....
Lanham Business College	5	24	.....	.....	.....	.....	.....	.....	10	40	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
Columbia Commercial University	17	11	13	58	2	.....	.....	.....	12	84	5	12	84	5	12	144	.....	.....	.....	.....	7	7	12	.....
Lima Business College	83	77	60	247	45	66	.....	.....	[3] 25	[4] 75	5	[3] 25	[4] 75	5	[3] 25	[5] 130	5	.....	.....	.....	5–7	5–7	12	.....
Marietta Commercial College	8	5	2	93	.....	1	.....	.....	13	[4] 65	5	13	[4] 65	5	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Safford's Business College	15	6	22	32	1	11	8	4	7	66	5	7	66	5	10	110	5	$7	.....	$5	9	9	18	.....
Oberlin Business College	70	65	40	120	35	50	.....	.....	13	60	.....	13	60	.....	13	110	.....	.....	.....	.....	6	6	12	.....
Ideal Business School	20	27	15	81	4	11	.....	.....	.....	85	.....	.....	83	.....	.....	140	.....	.....	.....	.....	6–7	6–7	10–12	.....
Sandusky Business College	36	24	20	112	.....	2	.....	.....	13	90	6	13	90	6	13	150	.....	.....	.....	.....	8	8	15	.....
Scio College	4	4	.....	15	5	4	.....	.....	12	68	.....	12	68	.....	10	120	.....	.....	.....	.....	6	6	12	.....
Steubenville Business College	51	10	11	169	7	17	.....	.....	13	85	5	13	85	5	13	99	5	.....	.....	.....	7–9	7–9	11	.....
Tiffin Business University	30	49	6	74	.....	.....	.....	.....	15	90	8	15	90	8	.....	.....	.....	.....	.....	.....	5	6	.....	.....
Davis Business College	115	85	20	425	10	65	.....	.....	10	.....	4	10	.....	4	14	.....	4	.....	.....	.....	6–9	6–9	9–12	.....

Tri-State Business University	190	200	190	266	61	113	.....	.....	10	90	4	10	90	4	14	120	4	.....	.....	.....	6-8	6-8	6-12	.....
Moore's Business College	21	34	.....	2	14	32	.....	.....	15	75	6	15	75	6	15	126	6	.....	.....	.....	10	8	10	.....
Warren Business College	8	33	.....	55	.....	.....	.....	.....	10	60	4	10	60	4	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Yocum's Wooster Business College	14	34	6	66	.....	.....	.....	.....	12	58	6	12	58	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Youngstown Business College	19	28	10	47	97	98	.....	.....	10	85	5	10	85	5	10	165	5	.....	.....	.....	8	8	16	.....
Meredith[1]Commercial School	40	48	32	67	20	31	.....	.....	15	.....	5	15	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
OKLAHOMA.																								
Stauffer's Business College	13	23	32	75	6	5	.....	.....	10	40	5	10	40	5	10	40	5	.....	.....	.....	6	6	8	.....
Anadarko's Commercial College	9	22	9	48	9	22	.....	.....	.....	50	.....	.....	45	.....	.....	75	.....	.....	.....	.....	5	6	9	.....
Chickasha Business College	15	10	10	40	25	100	.....	.....	.....	60	.....	.....	60	.....	.....	90	.....	.....	.....	.....	6	6	9	.....
Metropolitan Commercial College	55	32	.....	.....	54	65	.....	.....	10	50	5	.....	.....	.....	10	75	5	.....	.....	.....	5	7½	.....	.....
Enid Business College	80	71	46	143	8	21	.....	.....	13	60	4	13	60	5	13	100	.....	.....	.....	.....	6-8	6-7	12-14	.....
Capital City Business College	85	85	200	200	50	50	.....	.....	.....	50	.....	.....	50	.....	.....	100	.....	.....	.....	.....	4-6	4-6	7-9	.....
Kraughon Lehman Business College	73	114	67	236	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	5	.....	.....
Okmulgee Business College	18	15	29	56	44	42	.....	.....	.....	70	10	.....	70	10	.....	110	10	.....	.....	.....	.....	.....	.....	.....
Beeson Commercial College	6	2	11	81	1	3	.....	.....	15	75	5	15	75	5	15	140	5	.....	.....	.....	5-7	5-7	7-9	.....
Tulsa Business College	99	14	62	315	40	118	.....	.....	20	75	10	20	75	10	20	125	.....	.....	.....	.....	6-8	6-9	10-15	.....
OREGON.																								
Astoria International Business College	28	18	9	29	12	51	.....	.....	15	[4] 75	8	15	[4] 75	8	15	[4] 75	.....	.....	.....	.....	6-8	6-8	12-15	.....
Baker Business College	28	35	7	55	29	61	.....	.....	12	.....	8	12	.....	.....	15	80	8	.....	.....	.....	7	7	9	.....
Eugene Business College	22	9	.....	149	11	43	.....	.....	12	60	5	12	60	5	12	60	5	.....	.....	.....	6-9	12	18	.....
Belinke-Walker Business College	223	377	98	673	76	196	.....	.....	15	90	6	15	75	6	15	105	6	.....	.....	.....	.....	.....	.....	.....
PENNSYLVANIA.																								
Allentown Business College	52	13	62	116	.....	.....	.....	.....	12	100	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
American Commercial School	60	95	130	198	9	5	.....	.....	12	.....	5	12	.....	5	12	127	5	.....	.....	.....	12	12	15-18	.....
Gladstone Business College	.....	.....	2	19	.....	.....	.....	.....	.....	.....	.....	9	75	5	.....	.....	.....	.....	.....	.....	.....	8	.....	.....
Zeth School	10	21	27	73	10	20	.....	.....	10	.....	5	10	.....	5	10	.....	.....	.....	.....	.....	6	8	10	.....
Duff's College	80	35	55	55	.....	.....	.....	.....	13	105	6	13	95	6	.....	.....	.....	.....	.....	.....	8	8	.....	.....
Duff's, Beaver Falls	25	22	26	110	15	22	.....	.....	12	75	6	12	95	6	12	175	6	.....	.....	.....	5	7	11	.....
Greer Business College	23	15	5	49	2	15	.....	.....	10	70	5	10	70	5	15	100	5	.....	.....	.....	9	9	12	.....
Chalfant's Business College	26	7	15	48	.....	.....	.....	.....	10	75	5	10	65	5	.....	.....	.....	.....	.....	.....	5-10	5-10	.....	.....
Butler Business College	28	45	7	95	.....	.....	.....	.....	13	100	5	13	100	5	.....	.....	.....	.....	.....	.....	10	10	.....	.....
Carbondale Commercial Institute	7	10	14	56	1	12	.....	.....	10	[6] 28	5	10	[6] 28	5	12	[7] 120	.....	.....	.....	.....	8	8	12	.....
Wunderlich's Commercial School	.....	.....	4	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Russell's Business College	2	1	5	7	.....	.....	.....	.....	5	50	5	.....	.....	5	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
Dubois Business College	23	37	128	11	66	10	.....	.....	12	60	6	12	60	6	12	95	6	.....	.....	.....	4-6	4-6	8-12	.....
Churchman Business College	156	52	54	188	.....	.....	.....	.....	12	100	5	12	100	5	12	100	5	.....	.....	.....	10	10	20	.....
Davis Shorthand and Business School	75	115	16	134	.....	.....	.....	.....	10	70	5	10	70	5	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Erie Business College	55	14	34	212	13	72	.....	.....	12	105	6	12	95	6	12	120	.....	.....	.....	.....	8-10	7-9	10-20	.....
Leech's Actual Business College	23	15	7	134	10	35	.....	.....	10	85	5	10	85	5	14	140	.....	.....	.....	.....	.....	.....	.....	.....
Beckley's Business College	30	30	30	120	.....	.....	.....	.....	12	.....	5	12	.....	5	.....	.....	.....	.....	.....	.....	6-18	6-18	.....	.....
Harrisburg Shorthand School	19	23	27	123	13	15	.....	.....	10	60	4	10	60	4	10	100	.....	.....	.....	.....	5-6	5-7	10	.....
School of Commerce	56	47	113	495	20	92	.....	.....	12	80	5	12	80	5	12	130	.....	.....	.....	.....	6-8	6-10	12-15	.....

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[1] Penmanship course.
[2] Tuition fee for 4 months.
[3] Tuition $12 after first payment.
[4] Tuition fee for 6 months.
[5] Tuition fee for 1 year.
[6] Fee for 3 months.
[7] If course is completed in time prescribed.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PENNSYLVANIA—continued.																								
Hazelton Business College	27	40	30	160	.....	.....	.....	.....	$10	.....	$4	$10	.....	$4	.....	.....	.....	.....	.....	.....	5–8	6–8	.....	.....
Leech's Actual Business College	20	11	15	38	11	17	.....	.....	12	$120	6	12	$120	6	$16	$160	$6	.....	.....	.....	10	10	10	.....
Rowe Business College	19	18	15	57	26	43	.....	.....	12	75	5	12	75	5	12	125	5	.....	.....	.....	7	6	12	.....
Wyoming College of Business	61	48	13	72	.....	.....	.....	.....	14	62	.....	10	46	.....	.....	.....	.....	.....	.....	.....	5–9	5–9	.....	.....
Lancaster Business College	24	18	13	76	18	86	.....	.....	10	50	3	10	50	3	10	50	3	.....	.....	.....	6	6	12	.....
Panther Valley Business College	10	3	18	39	.....	.....	.....	.....	10	.....	4	10	.....	4	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Leech's Latrobe Actual Business College	14	26	5	59	13	15	.....	.....	12	100	6	12	100	6	14	120	6	.....	.....	.....	10	10	12	.....
Lebanon Business College	20	2	11	28	69	50	.....	.....	10	75	5	10	75	5	10	115	5	.....	.....	.....	.....	.....	.....	.....
Lock Haven Business Institute	5	1	.....	9	5	5	.....	.....	10	40	.....	8	40	.....	12	80	.....	.....	.....	.....	.....	.....	.....	.....
Douglas' McKeesport Business College	35	13	17	110	28	102	.....	.....	10	[1]80	5	10	[1]80	5	10	[1]145	.....	.....	.....	.....	15	10	12	.....
Duff's McKeesport College	11	5	7	167	24	68	.....	.....	13	105	5	13	90	5	.....	175	.....	.....	.....	.....	4–7	6–8	12–18	.....
McCanns School	30	30	25	45	.....	.....	.....	.....	12	.....	5	12	.....	5	.....	.....	.....	.....	.....	.....	7–8	7–8	.....	.....
New Bethlehem Business School	9	16	10	24	.....	.....	.....	.....	8	50	5	8	50	5	.....	.....	.....	.....	.....	.....	6	6	.....	.....
New Castle Business College	58	37	39	144	5	15	.....	.....	10	75	5	10	75	5	10	130	5	.....	.....	.....	9	9	18	.....
American Business College	10	6	9	49	16	55	.....	.....	10	100	5	10	100	5	10	100	5	.....	.....	.....	10–12	10–12	10–12	.....
Erie Night School	.....	.....	3	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	12–15	.....	.....
Kensington Business College	6	7	33	133	.....	.....	.....	.....	10	.....	4	10	.....	4	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Palmer School	43	25	71	221	21	46	.....	.....	14	.....	5	14	.....	5	14	.....	5	.....	.....	.....	.....	.....	.....	.....
Pierce School	642	221	254	1092	.....	.....	.....	.....	20	200	6	20	200	6	.....	.....	.....	.....	.....	.....	10–20	7–12	.....	.....
Philadelphia Business College	160	142	141	966	.....	.....	.....	.....	16	.....	6	16	.....	6	.....	.....	.....	.....	.....	.....	5–9	5–9	.....	.....
Stein Business College	.....	.....	6	27	.....	.....	.....	.....	.....	.....	.....	8	64	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Strayer's Business College	263	281	431	720	129	871	.....	.....	15	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	6–12	6–15	12–18	.....
Taylor Business School	.....	.....	55	215	.....	.....	.....	.....	.....	.....	.....	15	.....	5	.....	.....	.....	.....	.....	.....	.....	9	.....	.....
United Telegraph School	.....	.....	.....	.....	.....	.....	40	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$6	.....	.....	.....	10
Bowers Private School[2]	2	3	12	20	.....	.....	.....	.....	.....	.....	5	.....	.....	5	.....	.....	.....	.....	.....	.....	7	7	.....	.....

Boyd Business College			63	205								16	70	10								3-8		
Duff's Pittsburgh College	58	22	62	249	28	37			15	125	7	15	115	7	15	200	7				8½	7½	15	
Iron City College			70	378					14		7											6-8		
Martin Shorthand School			127	569								14	100	7									7	
Miss Conley's School of Shorthand				124								15										6-8		
Park Institute	37	22	96	262	31	17			11	80	5	11	80	5	11	80	5				8	8	15	
Pittsburgh Academy	46	60	99	266	33	17			12	120	6	12	80	6	12	185	6				10	10	12	
Pottstown Business College	35	45	40	60	50	90			12	75	6	12	75	6	12	120	6				14			
McCann's Business College	35	35	25	55					12		5	12		5							8	7		
Stoner's Inter-State Commercial College	33	26	13	95					10		4	10		4							6-8	5-7		
Commercial Institute	10	5	11	48	2	5	8	10	10		5	10		5	12					5	8	8	12	10
Scranton Lackawanna Business College	253	200	112	449					10	100	5	10	100	5							10	10		
Shenandoah Business College	3	8	13	11	16	19			5	40	5	5	40	5	10	100	10				9	9	10	
South Bethlehem Business College	94	61	54	232	16	3			12		5	12		5	12		5				8-10	8-10	12-18	
Sunbury Business College	8	30	8	30	8	30			10	65		10	65		10	65					10-12	10-12	24	
Towanda Business College	1	1	1	7	2	13			10	50		10	60		10	90					5	8	10	
Hoff Business College	15	5	20	120	30	50			10			10			10						6-9	6-9	12-15	
Washington Business College	35	70								[3] 30														
Waynesboro Business College	30	4	23	46	7	11			10	54	5	10	54	5							6	7	10-12	
West Chester Business School	5	35	1	30	5	9			13	78	5	13	104	5	13	130	5				10	10	10	
Wilkes-Barre Business College	60	100	90	150					10		5	10		5							8	9		
Wyoming Valley College of Business	50	40	35	48							4			4										
Potts Shorthand College	79	112							10	60														
Williamsport Commercial College	100	40	45	115	25	35			10	65	5	10	65								7	7		
York School of Business	103	59	85	125					8		4	8		4							4	6		
RHODE ISLAND.																								
Kinyon's Commercial School	67	58	27	96					15		5	15		5							6-8	6-8		
Miss Brayton's Special School	6	13	9	58					8		5	8		5							6	7		
Bryant and Stratton Commercial School	287	164	216	846					16	[4] 150	6	16	[4] 150	6	16	[4] 150	6				9-11	8-10	17-20	
Childs Business College	35	45	40	165					18	180	8	18	190	8							10	10	18	
Sweeney School of Shorthand and Typewriting			50	94								16		6								6-10		
Woonsocket Commercial School	81	47	29	165	2	2			14		6	14		6	14		6				14	10	20	
SOUTH CAROLINA.																								
Cecil's Anderson Business School	5	4	1	39	2	9			20	80		20	65		20	110					5	5	8	
Bowen-Macfeat Business College	38	16	17	194	15	40			10	60	5	10	60	5	10	135					6	6	8-10	
Newberry Business School				15								10	35									5-8		
Cecil's Spartanburg Business College	18	5	8	23	10	3				65			60			110					4-5	4-6	6-8	
SOUTH DAKOTA.																								
Aberdeen Business College	98	32	20	73	7	5			13	85	6	13	85	6	13	115	6				8	8	12	
Dakota Wesleyan Commercial School	6	26	4	55	9	61	11	4	4	25	8	4	25	8	4	25	8	$4			9	9	18	
Rapid City Business College	22	16	2	15	4	11			13	100		13	100		13	150					6-10	6-10	12-16	
Mrs. Muller's Business School	1	1	4	111	3	16			11			11			11						3	5	6	
South Dakota School of Business	30	20	18	175					12	100	5	12	100	5							12	12		

[1] Rate includes books and stationery

[2] Night school.

[3] Tuition fee for 3 months.

[4] Tuition fee for 10 months.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
TENNESSEE.																								
Chattanooga Business College	40	36	41	143	.....	.....	.....	.....	$12	$50	$4	$12	$50	$4	$12	$85	$4	.....	.....	.....	3–5	4–5	.....	.....
Mountain City Business College	104	19	82	836	23	28	.....	.....	12	60	4	12	60	4	15	100	.....	.....	.....	.....	6	6	12	.....
Modern Business College	9	5	4	23	.....	2	.....	.....	.....	50	.....	.....	50	.....	.....	90	.....	.....	.....	.....	5	5	8–9	.....
National Teachers' Normal and Business College	28	22	20	21	15	16	.....	.....	5	45	.....	4	40	.....	8	75	.....	.....	.....	.....	9	9	9	.....
Draughon's Knoxville Business College	65	100	85	185	25	90	.....	.....	15	60	.....	15	60	.....	15	100	.....	.....	.....	.....	4–6	4–6	7–10	.....
Knoxville Business College	26	98	16	326	18	42	.....	.....	15	70	.....	15	70	.....	.....	130	.....	.....	.....	.....	6	6	11	.....
Draughon's Memphis Practical Business College	12	15	8	45	5	10	.....	.....	13	65	6	13	65	6	15	110	6	.....	.....	.....	5	5	9	.....
Draughon's Nashville Practical Business College	112	162	69	342	44	72	.....	.....	10	65	.....	10	65	.....	10	65	.....	.....	.....	.....	5	6	9	.....
Falls Business College	28	28	20	180	8	32	.....	.....	12	70	.....	12	70	.....	12	120	.....	.....	.....	.....	6	6	12	.....
TEXAS.																								
Amarillo Practical Business College	30	14	27	156	1	2	.....	.....	15	60	5	15	60	5	15	90	5	.....	.....	.....	6	6	9	.....
Nixon-Clay Commercial College	50	60	30	196	20	60	.....	.....	10	50	4	10	50	4	10	80	4	.....	.....	.....	6	6	10	.....
New South College	50	50	20	200	30	50	.....	.....	10	60	7	10	60	.....	10	110	7	.....	.....	.....	3–8	3–8	5	.....
Bowie Commercial College	35	23	12	61	16	18	.....	.....	.....	50	.....	.....	50	.....	.....	90	.....	.....	.....	.....	4	4	6	.....
Gordon's Commercial College	4	2	15	24	2	2	.....	.....	.....	25	.....	.....	25	.....	.....	45	.....	.....	.....	.....	4	4½	6	.....
Corpus Christi Business College	30	29	12	108	.....	.....	.....	.....	10	90	6	10	90	6	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Harrell School of Business	4	4	22	180	.....	.....	.....	.....	10	50	4	10	50	4	.....	.....	.....	.....	.....	.....	4–6	4–6	.....	.....
McBride's Business School	.....	.....	5	127	.....	.....	.....	.....	.....	.....	.....	.....	35	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Draughon's El Paso Practical Business College	60	37	19	201	6	82	.....	.....	20	60	5	20	60	5	20	95	5	.....	.....	.....	3	4	6	.....
Palmore Business College	49	56	49	56	.....	.....	.....	.....	5	100	5	5	100	5	.....	.....	.....	.....	.....	.....	20	20	.....	.....

National Business College	70	40	115	255	190	205	....	....	15	60	8	15	60	8	20	113	....	....	....	....	6	6	8½	....
Draughon's Practical Business College of Galveston	44	20	60	147	8	4	18	11	[1] 15	60	5	[1] 15	60	5	[1] 15	95	5	[1] $15	....	$5	5	6	12	5
Greenville Business College	25	15	5	115	1	10	....	....	10	50	5	10	60	5	13	100	5	....	....	....	4	7	10	....
Massey Business College	68	85	2	4	38	103	....	....	15	60	6	15	60	6	15	90	9	....	....	....	6	6	....	....
Texas Business Institute	....	....	27	128	....	....	....	....	....	....	....	10	50	15	....	....	....	....	....	....	....	....	....	....
Marshall Business College	6	6	8	24	5	5	....	....	....	25	....	....	25	....	....	....	....	....	....	....	4	6	....	....
Paris Commercial College	94	68	59	199	20	30	....	....	15	50	5	15	50	5	15	85	....	....	....	....	6	5	9-12	....
Droughon's San Antonio Practical Business College	170	120	225	330	55	100	....	....	[2] 25	65	....	[2] 25	65	....	....	100	....	....	....	....	....	....	....	....
San Antonio Business University	....	....	79	116	....	....	....	....	....	....	....	....	52	4	....	....	....	....	....	....	....	7	....	....
Lone Star Business College	36	8	21	18	16	9	....	....	10	....	....	10	....	....	10	....	....	....	....	....	....	....	....	....
Texarkana Business College	32	10	20	10	100	90	....	....	....	55	....	....	55	....	....	85	....	....	....	....	4	4	6	....
Tyler Commercial College	144	127	390	345	540	478	98	87	20	60	....	20	55	....	30	100	....	20	$60	....	4	3½	5	5
Holcomb Training School	50	50	50	75	50	50	....	....	....	53	....	....	53	....	....	85	....	....	....	....	4-8	4-8	4-8	....
Hill's Business College	130	205	65	285	105	152	....	....	15	75	6	15	66	6	15	105	6	....	....	....	3-4	4	4	....
Toby's Practical Business College	163	49	89	251	34	35	8	6	[2] 30	115	[2] 15	[2] 25	90	[2] 12	[2] 40	160	....	[2] 30	75	....	4-6	3-6	8-15	4-8
Weatherford College Business School	5	5	5	30	....	10	....	....	7	42	....	7	42	....	10	75	....	....	....	....	6	6	9	....
National Business College	31	24	18	185	6	11	....	....	15	60	5	15	60	5	15	60	5	....	....	....	4-5	4-5	6-8	....
Baldwin's Business College	24	11	8	57	10	11	....	....	12	[3] 57	6	12	[3] 57	6	12	[4] 78	6	....	....	....	3-6	3-6	6-9	....
UTAH.																								
Smithsonian Business College	105	14	60	316	....	....	....	....	10	....	5	10	....	5	....	....	....	....	....	....	8	7	....	....
Jos. W. N. Wille Shorthand Classes	....	....	1	3	....	....	....	....	....	....	....	....	....	15	....	....	....	....	....	....	....	....	....	....
Utah Business College	12	12	23	146	3	18	....	....	15	[3] 75	8	15	[3] 75	8	15	[4] 100	....	....	....	....	6-9	6-9	9-12	....
VERMONT.																								
Clawson-Hamilton Commercial College	23	9	4	57	3	11	....	....	15	....	4	15	....	4	15	....	4	....	....	....	4-6	5-8	10-12	....
Burlington Business College	24	14	12	110	....	....	....	....	10	....	4	10	....	4	....	....	....	....	....	....	6-10	6-10	....	....
Rutland Business College	10	18	34	62	46	90	....	....	12	....	5	12	....	5	12	....	5	....	....	....	7-10	7-10	9-12	....
VIRGINIA.																								
Piedmont Business College	30	10	54	103	....	....	....	....	15	75	....	15	75	....	....	....	....	....	....	....	7-9	7-9	....	....
Virginia Commercial and Shorthand College	25	2	5	50	5	75	....	....	13	60	....	13	60	....	15	75	....	....	....	....	6-7	6-7	7-9	....
International Business College	27	13	34	152	13	7	....	....	12	55	6	12	55	6	15	85	6	....	....	....	6	6	10	....
Davis-Wagner Business College	33	48	18	300	22	30	....	....	13	60	5	13	60	5	13	100	5	....	....	....	6	6	10-12	....
Bowman Commercial College	15	7	22	95	6	27	....	....	....	60	....	....	60	....	....	100	....	....	....	....	6	5	6	....
Smithdeal Business College	45	21	76	309	14	23	....	....	12	60	6	12	60	6	15	90	6	....	....	....	4-6	3-5	6-10	....
Roanoke National Business College	113	13	25	399	29	12	....	....	12	[3] 65	10	12	[3] 65	10	12	[5] 120	10	....	....	....	6-8	6-8	12-14	....
Dunsmore Business College	70	2	3	56	....	....	....	....	12	75	....	12	75	....	....	....	....	....	....	....	9	9	....	....
Templeton Business School	11	7	5	50	....	20	....	....	11	70	....	11	70	....	11	85	....	....	....	....	8	8	10	....
WASHINGTON.																								
Gray's Harbor Business College	56	135	22	185	12	130	....	....	15	125	12	15	125	12	15	125	12	....	....	....	9	9	15	....
Wilson's Business College	10	14	19	172	17	14	....	....	15	[3] 75	8	15	[3] 75	8	15	[6] 125	....	....	....	....	6	6	10	....
Centralia Business College	3	10	1	55	7	56	....	....	15	75	7	15	75	7	15	105	7	....	....	....	6	6	9	....
Hyatt-Fowells School of Commerce	34	83	44	318	32	93	....	....	15	80	6	15	80	6	15	115	6	....	....	....	6	6	9	....
Northwestern Shorthand Reporting School	15	150	8	210	23	79	....	....	15	85	6	15	85	6	15	160	6	....	....	....	6	6	12	....
Progressive Shorthand School	....	....	3	68	....	....	....	....	....	....	....	13	45	....	....	....	....	....	....	....	....	3	....	....
Success Shorthand School	5	60	21	509	....	5	....	....	15	....	5	15	75	5	15	....	5	....	....	....	2-6	3-6	6-9	....

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[1] Tuition reduced after first month.
[2] Tuition fee reduced after first payment.
[3] Tuition fee for 6 months.
[4] Tuition fee for 9 months.
[5] Tuition fee for 1 year.
[6] If course is completed in prescribed time.

TABLE 20.—*Enrollment by courses of study, tuition fees, and time required for graduation in private nondenominational commercial and business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation (day course).			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire).						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
WASHINGTON—continued.																								
Wilson's Modern Business College	207	406	310	591	.....	20	.....	.....	$15	.....	$6	$15	.....	$6	$18	.....	$6	.....	.....	.....	6–8	6–8	9–12	.....
Counselman's School of Stenography	.....	1	.....	137	.....	16	.....	.....	15	$40	10	15	$75	10	15	$75	10	.....	.....	.....	2–3	5	6	.....
Northwestern Business College	87	69	19	397	18	23	.....	.....	15	75	.....	15	75	.....	15	120	.....	.....	.....	.....	.....	.....	.....	.....
Bentel Business College	25	85	20	180	5	20	.....	.....	15	75	8	15	75	8	15	85	8	.....	.....	.....	6	6	12	.....
State Business College	70	46	18	97	.....	.....	.....	.....	13	100	6	13	100	6	.....	.....	.....	.....	.....	.....	8	8	.....	.....
Walla Walla Business College	20	13	4	88	4	26	.....	.....	12	65	4	12	65	4	12	100	4	.....	.....	.....	6	6	10	.....
Wenatchee Business College	14	13	17	104	1	15	.....	.....	15	70	8	15	70	8	15	90	8	.....	.....	.....	6	6	9	.....
WEST VIRGINIA.																								
Bluefield Normal and Business College	.....	.....	.....	.....	12	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	.....	.....	.....	.....	.....	6	.....
Summit City Business College	14	5	5	163	.....	.....	.....	.....	10	50	5	10	50	5	.....	.....	.....	.....	.....	.....	7	7	.....	.....
Capital City Commercial College	70	34	54	372	3	5	.....	.....	12	65	.....	12	65	.....	14	110	.....	.....	.....	.....	6	6	6	.....
West Virginia Business College	60	200	.....	.....	10	110	.....	.....	15	75	6	15	75	6	15	135	6	.....	.....	.....	6	6	10	.....
Boothe Business School	21	72	55	270	.....	.....	.....	.....	10	.....	5	10	.....	5	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Martinsburg Business College	16	9	29	59	.....	.....	.....	.....	[1] 8	.....	4	[1] 8	.....	4	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
Elliott Commercial School, Wheeling	83	30	58	377	18	47	.....	.....	15	110	5	15	110	5	15	180	.....	.....	.....	.....	9	9	18	.....
WISCONSIN.																								
Actual Business College	24	81	24	79	.....	.....	.....	.....	15	100	5	15	85	5	.....	.....	.....	.....	.....	.....	9	8	.....	.....
Appleton Business College	75	225	65	255	50	100	.....	.....	12	60	.....	12	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gordon's Business College	3	7	4	36	2	34	.....	.....	12	72	5	12	72	5	12	108	.....	.....	.....	.....	8–12	6–12	8–12	.....
Baraboo Business College	7	14	3	52	.....	20	.....	.....	12	.....	4	12	.....	4	12	.....	4	.....	.....	.....	8	6	9	.....
Hunt's Business College	45	80	22	144	20	76	.....	.....	15	[2] 87	6	15	[2] 87	6	15	[3] 145	6	.....	.....	.....	6–8	6–8	10–12	.....

Badger Commercial College and Telegraph School	7	6	1	27	15	21	6	7	12	75	4	12	65	4	12	140	5	$12	$60	$5	6–8	6–8	10–15	6
Green Bay Business College	15	12		120	2	7			12	85		12	75		12	150					8	7	15	
Janesville Business College	21	47	3	98	7	66			15	130	5	15	130	5	15	130	5				8–9	7–9	12–18	
Wisconsin Business University	160	10	12	100					13	75		13	75								9	9		
Capital City Commercial College	78	117	24	95					15			15									9–12	6–8		
Success Shorthand School			6	73					15	75												6		
Manitowoc Business College	38	22	4	55	6	11			10	60	5	10	60	5	10	100					7	7	12	
Twin City Commercial School	16	13	7	98	8	23	4	7	9	[4]100	4	9	[4]100	4	9	[4]100	4	9	[4]100	4	6–9	6–9	10–15	
Merrill Commercial College	25	50							13	85	6										8–18			
Hoffman Metropolitan Business College	17		3	77	23	52			10	75	5	10	75	5	10	120	5				6–7	6–7	12	
Miss Brown's School of Business		143	5	209		140			15			15									6–8	6–8	9–12	
Miss Kelly's School of Stenography				65								10	60	5								6		
Railway and Commercial Telegraph Institute							11	21										10	65	10				6–7
Spencerian Business College	98	68	25	301	24	72			12		5	12		5	12		5				6	5	9	
Wisconsin School of Accountancy and Stenography	22			13					13		5	13		5							10	10		
Oshkosh Business College	30	8	25	171	32	28			12	80	5	12	80	5	12	120	5				8	8	12	
Wisconsin Business College	93	13	12	153	5	12			15	108	6	15	108	6	15	108	6							
Potter Business College	15	11	1	25		5			12	72	6	12	72	6	12	72	6				6	6	6	
Steiner Business College	5	11	5	14					8	40	4	8	40	4							5	5		
Wausau Business College	46	8	16	95	23	10															9	9	18	
WYOMING.																								
Cheyenne Business College	8	2	10	70	5	5			12	60	5	12	60	5	12	90	5				6	6	9	
Spencer Business College	17	35	25	53	8	12			12	110	6	12	110	6	12	135	6				10	14	14	

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[1] Tuition reduced after third month.

[2] Tuition fee for 6 months.

[3] Tuition fee for 10 months.

[4] Tuition fee for 15 months.

TABLE 21.—*Statistics of Y. M. C. A. and denominational business schools reporting in 1917–18.*

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation.			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire) course.						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire) course.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ALABAMA.																								
Y. M. C. A. Night School, Birmingham	25	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McGill Institute, Mobile	16	.....	33	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	8	8	.....
CALIFORNIA.																								
Y. M. C. A. School of Commerce and Finance, Los Angeles	139	.....	101	.....	.....	.....	.....	.....	$12	[1]$60	(2)	$12	[1]$60	(2)	.....	.....	.....	.....	.....	.....	6	6	.....	.....
Y. M. C. A. School, San Francisco	38	.....	46	.....	64	.....	.....	.....	13	55	$4	13	55	$4	$13	$110	$4	.....	.....	.....	5	5	10	.....
COLORADO.																								
Y. M. C. A. Business School, Denver	26	.....	34	.....	90	.....	.....	.....	10	65	(3)	10	65	(3)	10	.....	(3)	.....	.....	.....	.....	.....	.....	.....
CONNECTICUT.																								
Y. M. C. A. School, Bridgeport	.....	.....	.....	.....	.....	.....	6	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5	.....	.....	.....	.....
Hillyer Institute, Hartford Y. M. C. A	.....	18	.....	17	.....	.....	.....	.....	.....	.....	10	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
DISTRICT OF COLUMBIA.																								
Washington Commercial School, Y. M. C. A	30	.....	300	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	5	.....	.....	.....	.....	.....	.....	8	8	.....	.....
GEORGIA.																								
St. Patrick's Commercial Institute, Augusta	15	.....	15	.....	15	.....	.....	.....	6	60	.....	6	60	.....	6	120	.....	.....	.....	.....	10	10	20	.....

ILLINOIS.																								
Cathedral Commercial High School, Belleville					29																		20	
Central Y. M. C. A. Institute, Chicago	100		35		18						3			3			8				[4]9-12	[4]9-12	[4]18-24	
St. Alphonsus School, Chicago					27	55									1								20	
St. Andrew School, Chicago						43										40							12	
St. Bridget's Commercial School, Chicago						43									5	35							6-10	
St. Columbkille School, Chicago						36									2								20	
St. Michael's High School, Chicago					43	53																		
St. Patrick's Commercial Academy, Chicago					497																			
Sears-Roebuck Y. M. C. A. Schools, Chicago	28		17		3						4			4			4							
Y. M. C. A. Commercial High School, Division St., Chicago	8		13		5						(6)			(6)			(6)				[4]9	[4]9	[4]18	
INDIANA.																								
St. Peter's School, Fort Wayne					18	19																	18	
Y. M. C. A. Schools, Indianapolis	20		11				20				10			10						10	[4]6	[4]6		[4]12
St. Mary School, Richmond						15									2	45							30	
Y. M. C. A. Night School, South Bend	30						10				2									3	[4]7½			[4]6
KENTUCKY.																								
Holy Family Business School, Ashland					8	45									5	65							9	
Sacred Heart School, Bellevue					5	20									1								20	
St. Joseph High School, Covington					33										2	40							19	
St. Helena's Commercial College, Louisville	6	41	2	76		44			10		5	10		5	10		5							
Y. M. C. A. Schools, Louisville	53		76	23			121	99			3			3				$12	$48	4	[4]8	[4]8		4
MARYLAND.																								
Association Institute, Y. M. C. A., Baltimore	137	32	67					8	10		5	10		4				5		5	6	6		4-6
St. Andrew's Commercial School, Baltimore					5	15									5	50							10	
St. Gertrude's Commercial School, Gardenville					9	14									2	20							20	
MASSACHUSETTS.																								
Cheverus Commercial School, Boston					8	127																	20	
Huntington School for Boys, Boston	35		10							28			28	(8)							36	36		
Northeastern Preparatory School, Boston	148		190								(7)			(7)							12	12		
Y. W. C. A. Commercial School, Boston						180									7		3						7-10	
St. Ann's Commercial School, Fall River					28										4	80							20	
St. Patrick's Boys' School, Lowell					43																			
St. Mary's School, Melrose				22																		30		
St. Patrick's Commercial High School, Watertown					18	65																30		
Northeastern College School of Commerce and Finance, Y. M. C. A., Worcester	18		6							[6]20			[6]20									[4]8	[4]8	

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[1] If completed within the prescribed time.
[2] $15 for 17 weeks.
[3] $15 for 30 weeks.
[4] Time required in night school.
[5] Tuition fee, $29.50 for 36 weeks.
[6] Tuition, $250 per year.
[7] Tuition, $10 for 16 weeks.
[8] Tuition fee, night course.

TABLE 21.—*Statistics of Y. M. C. A. and denominational business schools reporting in 1917-18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation.			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire) course.						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire) course.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
MICHIGAN.																								
Institute of Technology, Y. M. C. A., Detroit	56		13							$33			$33								6-8	6-8		
St. Joseph's Commercial School, Detroit	122								$3	(1)											30			
Suomi College, Hancock	10	11		23	5	11				65			65			$65					9	9	9	
MINNESOTA.																								
Y. M. C. A. Schools, Duluth	6		9				27	11			$2			$4						$4				
Central Branch, Y. M. C. A., Minneapolis	75		32				8		10		[2] 17	$10	[2] 20							4				
Y. M. C. A. Night School, St. Paul	29		12							[3] 12			[2] 14								7	7		
MISSOURI.																								
Y. M. C. A. School, St. Joseph					5											[2] 34							[4] 7	
Ralph Sellew Institute, Y. M. C. A., St. Louis	18		11							[3] 25			[3] 25								[4] 9	[4] 9		
Y. W. C. A. School, St. Louis						382									$6	35	$3						7	
St. Francis Borgia Commercial School, Washington					4	6																	20	
NEBRASKA.																								
Y. M. C. A. Night School, Omaha	33		70				26				3			5						6	7½	7½		6
NEW JERSEY.																								
Y. M. C. A. Institute, Camden	8		14								([3])			([4])							7½	7½		
School of Our Lady of Grace, Hoboken			14	34																		10		
St. Paul's Academy, Jersey City						33									62									
Y. W. C. A. School, Newark				77									35									8		

NEW YORK.																								
Bedford Branch Y. M. C. A. School, Brooklyn	32		81							[3] 12			[3] 17								[4] 7½	[4] 7½		
Marquand School, Y. M. C. A., Brooklyn	166		165		284					[3] 25			[3] 30			[3] 55								
St. Barbara Commercial School for Boys, Brooklyn					14				2	45													20	
St. Joseph's Commercial High School, Brooklyn				100		300						8	75		5	100					10	10	20	
Association Institute, Y. M. C. A., Buffalo	30										10										9			
Chelsea School, New York	208		235		443				15	75	6	15	75	6	15	125	10				8	8	15	
East Side Y. M. C. A. School, New York	27		35								4			4							[4] 8½	[4] 8½		
Harlem Y. M. C. A., Evening School, New York	53		42							[3] 20	3		[3] 18	3							[4] 8	[4] 8		
St. Vincent Ferrer School, New York					8	61																	20	
West Side Y. M. C. A. Schools, New York	121		211							[3] 18			[3] 18								[4] 8	[4] 8		
NORTH CAROLINA.																								
Y. M. C. A. School, Charlotte	10		6							[3] 5			[3] 5								[4] 6	[4] 6		
OHIO.																								
St. John's Commercial High School, Bellaire						19									2	40							20	
St. Joseph College, Cincinnati	17		13						5			1									30	20		
St. Xavier School, Cincinnati					68	94									2	12							30	
Y. M. C. A. School, Cincinnati	120		90						10	50		10	50								6	6		
Central Y. M. C. A. School, Cleveland	73		40						6	63	(5)	6	63	(5)							12	12		
Girls' Catholic High School, Cleveland						36																	20	
St. Francis Commercial School, Cleveland		1			25	54																		
Sacred Heart School, Columbus						75									1	20							20	
Y. M. C. A. Institute, Dayton [6]	25		22							15			25								14	14		
St. Wendelin School, Fostoria					7	10									2								20	
Y. M. C. A. School, Hamilton [6]	7		5				5			12			15						$8					
Holy Redeemer School, Portsmouth				12	8	29										50						12	12	
Y. M. C. A. School, Springfield [6]	14		7							20			20								6	6		
Y. M. C. A. School, Toledo [6]	8										3										5			
Y. M. C. A. School (commercial department), Youngstown	13		20							[7] 30			[7] 30								18	18		
St. Nicholas High School, Zanesville					18	22																		
OREGON.																								
Christian Brothers Business College, Portland					70										(8)								30	
Y. M. C. A. Schools, Portland	86		156		7				12		4	12		4	12		4				6	6	8	

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[1] Tuition, $30 per year.
[2] Tuition fee for 7 months in night school.
[3] Tuition fee for night course.
[4] Time required in night school.
[5] Tuition fee, $37 for entire course in night school.
[6] Night school.
[7] Tuition fee for 9 months in night school.
[8] Tuition fee, $5 to $8 per month.

TABLE 21.—*Statistics of Y. M. C. A. and denominational business schools reporting in 1917–18*—Continued.

Institutions.	Students enrolled in day and night courses in—								Tuition fee.												Months required for graduation.			
	Commercial course.		Stenographic course.		Combined course.		Telegraphy (wire).		Commercial course.			Stenographic course.			Combined course.			Telegraphy (wire) course.						
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Day course, per month.	Entire day course.	Night course, per month.	Commercial course.	Stenographic course.	Combined course.	Telegraphy (wire) course.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PENNSYLVANIA.																								
St. Joseph's School, Danville					6	5																	20	
St. Bernard's High School, Easton					8	22																	20	
St. Kyron's Parochial School, Heckscherville					11	19																	20	
St. Peter School, McKeesport					21	42																	20	
St. Francis de Sales School, McKees Rocks					10	22																	20	
St. Joseph's Academy, Oil City					26	41																	24	
Pennsylvania R. R. Y. M. C. A., Philadelphia			39	36								$2	$8	$2								6		
Y. M. C. A. School, Scranton [1]					22											$12							6	
Holy Infancy Parochial School, South Bethlehem	9	22																			20			
Y. M. C. A. Evening School, Wilmerding	10	10	6	21	11	31					$3			3			$3				18	18		
RHODE ISLAND.																								
Sacred Heart High School, Central Falls					90																			
TEXAS.																								
Y. M. C. A. Evening School, Dallas	4									$15											6			
St. Anthony's Business College, Fredericksburg					12										$5	150							30	

UTAH.																								
Latter-Day Saints Business College, Salt Lake City	126	173	170	638	18	76	5	16	$7	.....	4	7	.....	4	7	.....	4	$7	.....	.....	.....	.....	.....	.....
VIRGINIA.																								
St. Paul's Male Academy, Portsmouth	.....	.....	.....	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	30	.....
St. Andrew's School, Roanoke	.....	.....	.....	.....	4	14	.....	.....	.....	.....	.....	.....	.....	.....	3	25	.....	.....	.....	.....	.....	.....	10	.....
WASHINGTON.																								
Y. M. C. A. School, Seattle	70	.....	.....	.....	16	.....	.....	.....	.....	[2] 21	.....	.....	.....	.....	.....	[2] 21	.....	.....	.....	.....	6	.....	9	.....
Jenkins Institute, Spokane	10	.....	.....	.....	3	2	18	58	13	65	6	.....	.....	.....	13	65	6	13	$65	$6	.....	6	6	6

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[1] Night school.

[2] Tuition fee for 6 months in night school.

.GTON
PRINTING OFFICE
19

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 48

EDUCATIONAL HYGIENE

By

WILLARD S. SMALL
SPECIALIST IN SCHOOL HYGIENE, BUREAU OF EDUCATION

[Advance sheets from Biennial Survey of Education
in the United States, 1916–1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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EDUCATIONAL HYGIENE.

By WILLARD S. SMALL.

Specialist in School Hygiene, Bureau of Education.

CONTENTS.—Physical education in the preparation of teachers.—Malnutrition and the nutrition class.—Health supervision.—Closing school as a measure for controlling epidemics.—Eye hygiene.—Oral hygiene.—State legislation for physical education.—The Nation's need of physical education.—Physical education and military training.

PHYSICAL EDUCATION IN THE PREPARATION OF TEACHERS.

Effective physical education of the children of the elementary schools will always be conditioned largely upon the regular classroom teachers. Obviously physical education must have a large place in the preparation of teachers if they are to play well their part in the conservation of the physical resources of childhood. It must be recognized that this part of the preparation of teachers is fundamental and vital, not an accessory to the formularies of mental training and discipline.

There are about 250 normal schools in the country—State, county, and city schools. Returns from 145 of these to an inquiry by the Bureau of Education show the following facts as to extent and character of physical education:

1. Number requiring health certificate at entrance		44
2. Number requiring medical examination		68
3. Number requiring health certificate for graduation		24
4. Number requiring physical exercise of all students		124
Gymnastics	100	
Dancing	55	
Athletics	47	
Games	102	
5. Number requiring practice teaching:		
(*a*) In calisthenics	74	
(*b*) In gymnastics	68	
(*c*) In dancing	63	
(*d*) In athletics	40	
(*e*) In games	91	
6. Number having special teachers of physical training:		
(*a*) Male	53	
(*b*) Female	111	
7. Number having gymnasiums		110
8. Number having swimming-pools		23

The first striking fact is the relative neglect of physical standards for teachers. Less than one-third require a health certificate for entrance; less than one-half require a medical (or physical) examination at any time; just one-sixth require a health certificate for graduation. It may be noted in passing that the health certificate required is rather a certificate of freedom from disease than a certificate of vigorous health.

Two important omissions will be noted: The time devoted to physical education and the kind of instruction in health habits and health knowledge.

The encouraging things in this report are the number requiring physical exercise of all students, the emphasis upon games, both in required exercise and in practice teaching, and the number having gymnasiums. There is a distinct gain in these respects in the last 10 years.

From these returns and from other inquiries, studies, and observations two important generalizations may be made:

1. In a few normal schools a broad and true conception of physical education prevails. It is recognized as organic and general, not as specialized psychomotor training. It sees that its job is to know how children grow into health and to control the conditions and practices that are favorable or unfavorable to such growth. And it sees, further, that the way to make such principles effective in the schools is to make them effective in the preparation of teachers.

Certainly the following elements enter into such a program: Physico-medical examination at entrance and annually, at least, during the course; health certificate for graduation; daily physical exercise, at least one hour, of an enlivening and joy-producing kind; practice teaching of such exercise for children; playgrounds and gymnasiums necessary for such exercise; practical study of hygiene as exemplified in school life and environment; instruction in normal physical diagnosis.

2. The second conclusion is that complete fulfillment of these conditions in normal schools is rare. A few schools meet all the conditions with a considerable degree of thoroughness; more meet some of the conditions well and are short on the rest or meet them inadequately; and others meet all these conditions inadequately or not at all.

There is, however, light upon the horizon. Most of the newly enacted laws interpret physical education in the broad sense indicated above. Some of these, tho compulsory in form, are hardly more than permissive in substance, but they all point to a new emphasis on physical education in the normal schools. Several of them specifically include the normal schools in the application of the law. In other States, some normal schools without the stimulus of law are doing excellent work. In many instances readjustment of programs and ideals will be necessary. Three things will be required: (1) Time, (2) careful planning of the course in physical education, and (3) broadly prepared teachers.

A minimum of one hour a day of enlivening and joy-producing exercise has already been suggested. This serves a double purpose; to conserve and develop the health of the students and to produce the raw material of personal experience without which it is hopeless to undertake to train teachers to teach.

Complementary to this at least one hour (period) per day should be given to instruction in the principles and practice of physical education. Not to enter deeply into details, under "principles" must be included the basic sciences anatomy, physiology, and hygiene—general, individual, and group; and the values of physical education—educational, social, civic, and economic.

Under "practice," must be included certainly practice in hygienic inspection of school plant; in cooperation with medical inspectors and nurses; in conduct of posture examinations and tests; in direction of drills, gymnastics, and games, community recreation projects; and in teaching habits and ideals of health.

VOLUNTARY ORGANIZATIONS.

The war has given stimulus to many voluntary organizations seeking to improve the health of school children. It may not be invidious to mention especially the Child Health Organization. This is an outgrowth of a committee of the New York Academy of Medicine on "War-time problems of childhood," formed primarily to study the problem of malnutrition among school children. "The revelation of the extent to which malnutrition had been shown to exist among school children of New York and its steady increase, due to ignorance of food values and the rising cost of food, was brought to the attention of Secretary Lane, of the Department of the Interior, who urged the formation of a national committee composed of lay and medical members to study the problem and advise means for its solution. In order to avoid the creation of an entirely new association, an organization to promote the health of school children was perfected as one of the branches of the National Child Labor Committee, which has always been interested in health education."

The following is a program that the Child Health Organization has set itself:

1. To teach health habits to children and to secure adequate health examinations for all children in the public schools of the country, including—

(*a*) Stimulation of children's interest by placing weighing and measuring scales in every school and acquainting children with ways and means of reaching the normal weight and height.

(*b*) Determination of proper standards for examinations with special reference to normal nutrition and growth.

(*c*) Methods of examination; how extensive for general application.

(*d*) Health records, which should cover the entire school life of the child and, with scholarship record, accompany him in his progress through school, and in making his application for a work permit.

(*e*) The arousing of a public demand for health examinations, the teaching of health habits, and the keeping of health records as a part of the regular routine of school life.

2. To consider the urgent problem of malnutrition among school children.

(*a*) A more careful study than has yet been made to determine its extent and degree, both in urban and rural communities.

(*b*) A study of the measures proposed to combat this condition, such as, (1) special nutrition classes; (2) making it possible for children to get one or more hot meals at school; (3) instruction of the community in the proper feeding of children of school age.

(*c*) To furnish information to educational and philanthropic organizations regarding the practical application of the results of these studies.

3. To safeguard the health of children in industry; this involves:

(*a*) The requirement of physical fitness for each particular job.

(*b*) The periodical examination of children who remain at work in factories, stores, and other establishments.

(*c*) The cancellation of permits to work at jobs not suited to the children from the health viewpoint.

4. Propaganda to awaken the public to the necessity of conserving the health of the school child as a basis of national security and stability.

5. To promote or cooperate with other bodies in securing legislation for the attainment of these objects.

The Bureau of Education, through its Division of School Hygiene and Physical Education, in collaboration with the Child Health Organization, is issuing health education material based upon the principle that normal increase in weight is the best rough and ready health index, and that by frequently recording the weights of children in a classroom the interest of children in health habits will be stimulated and sustained. The material consists of classroom weight records and a series of simple health education pamphlets.

Another notable contribution to the devices for teaching health is the Health Crusader plan of the National Tuberculosis Association.

MALNUTRITION AND THE NUTRITION CLASS.

To combat malnutrition by instruction and the formation of health habits is the object of the "nutrition class." An experimental nutrition class was conducted under the auspices of the Bureau of Educational Experiments in Public School No. 64, New York, in 1918. The class was conducted under the direction of Dr. W. R. P. Emerson, of Boston.

In Public School No. 64, Manhattan, where the experiments were conducted, 894 children were weighed and measured. The heights and weights were compared with standard measurements, so that the ratio of actual weight to average weight for height could be determined for each child. This average weight for children who measure 53 inches is 69 pounds. A child of this height who weighs only 62 pounds is 7 pounds, or 10 per cent, less than the average. The accompanying table shows the percentage of children in four different grades who were—(1) 7 per cent or more under the average weight for their height, (2) within 7 per cent of average weight, and (3) more than 7 per cent over the average weight for their height.

Percentage of overweight and underweight children.

		Grade VII.	Grade VI.	Grade V.	Grade I.	Total.
Children 7 per cent or more overweight	Number	38	40	21	27	126
	Per cent	22.0	16.3	16.5	10.6	15.8
From 7 per cent overweight to 7 per cent underweight	Number	110	166	79	185	540
	Per cent	63.6	67.8	62.2	72.5	67.4
Children 7 per cent or more underweight	Number	25	39	27	43	134
	Per cent	14.4	15.9	21.3	16.9	16.8
Total	Number	173	245	127	255	800
	Per cent	100.0	100.0	100.0	100.0	100.0

Different conditions were provided for these four classes, and an attempt has been made to determine to what extent various methods of procedure were successful. These conditions may be grouped under the following general captions:

I. *Instruction in health habits.*—A child should be taught proper habits of eating; sufficient mastication, the elimination of water as a flush, regular meals at a time of minimum fatigue, stimulants such as tea and coffee not to be used. These are some of the things toward which a child's attention should be directed.

II. *Removal of physical defects.*—Adenoids, enlarged tonsils, and defective teeth are contributing factors in undernourishment. They supply toxins which interfere with digestion, and the adenoids and tonsils prevent the taking in of sufficient oxygen.

III. *Rest and lunches.*—Undernourished children are unable to store up sufficient energy during the ordinary night's rest or through the usual number of meals. A rest period once or twice during the day provides an opportunity for recuperation, and food taken at more frequent intervals is more beneficial than the same amount consumed in the usual three meals.

IV. *Direct feeding.*—It has been assumed in many instances that the reason for undernourishment or malnutrition is inability to procure the necessary food.

If this is the condition, food should be supplied. One group of children was given only a midday meal, which was supposed to meet all the demands in the way of quantity and quality of food. Another group was given only instruction in health habits, with recommendations for rest and food and the removal of physical defects. Another group was given the instruction in health habits and provision was made for rest periods and mid-morning lunches, with recommendations for the removal of physical defects. Still another group was given all of the provisions so far mentioned. Comparison of results in these different groups shows that the poorest progress is made where nothing is provided except a sufficient quantity of food. The greatest progress was made by the children who were instructed in health habits, and who were simply advised to have frequent intervals of rest and more frequent meals.

The physical defect which seems to have the greatest effect on the nutritive processes, judged by the New York experiment, is that of the naso-pharyngeal obstruction. Out of the 105 children included in the classes, 69 suffered from this breathing obstruction. Two out of every three undernourished children had difficulty in getting sufficient oxygen. Comparisons of the progress made by those who did not need an operation, by those who needed and did not have an operation, and by those who needed and had an operation performed, show a serious handicap is imposed on children when the obstruction is allowed to remain.[1]

SEX EDUCATION.

The war has lifted the veil of false modesty from the question of social hygiene and sex education. Effective methods of instruction in the cantonments have been developed. The Commission on Training Camp Activities through its camp community service has done much to educate the public. The State health departments and the United States Public Health Service have carried on effective educational propaganda. Religious and educational societies as well as medical societies are seriously grappling with the great problems of sex education. The bureau, in cooperation with the medical section of the Council of National Defense, has issued a pamphlet, "Keeping Fit," for high-school boys, giving simply and briefly the main factors in physical fitness, including sex. The appreciation of this pamphlet has been instantaneous and sincere. Requests have come for large numbers of copies not only from high schools but also from the Young Men's Christian Association, Boy Scouts, industrial firms, and many other sources.

The Public Health Service and the Bureau of Education in cooperation are planning a thorough investigation of practicable methods of sex education in the high school.

The Interdepartmental Social Hygiene Board, created by Congress in the summer of 1918, is authorized to pay the sum of $300,000—

> to such universities, colleges, or other suitable institutions or organizations as in the judgment of the Interdepartmental Social Hygiene Board are qualified

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[1] Report furnished by Dr. David Mitchell, Bureau of Educational Experiments, 16 West Eighth Street, New York.

for scientific research for the purpose of discovering and developing in accordance with the rules and regulations prescribed by the Interdepartmental Social Hygiene Board more effective educational measures in the prevention of venereal diseases and for the purpose of sociological and psychological research related thereto.

MEDICAL SUPERVISION.

In all foreign countries the medical supervision of schools has suffered during the war. School medical officers, like all other members of the medical profession, have been called to military service. In our own country the same condition prevails, though to a less degree. For example, the consolidation of all health supervision and physical education activities under the school authority was successfully inaugurated in Holyoke, Mass., in 1915–16. In 1917 the efficient director of the work went elsewhere, and under war conditions no competent successor could be found.[1] In few States or communities, however, has there been any improvement in the work of school medical supervision. North Carolina appears to be one exception. The revised law which went into effect at the beginning of the present school year requires that teachers shall make a preliminary examination of all pupils, and provides for detailed examination of all suspected chidren by the county medical officer or by a physician designated by the State health department. The report of the first year's work under the new law shows that "more than 3,000 teachers properly filled out the cards after careful preliminary examination of more than 150,000 children"; and that of this "number of children, 34,387, or nearly one-fourth, have been carefully examined by the school physician or a specially trained school nurse." The report further shows much successful follow-up work and the establishment of dental clinics. "The most gratifying feature of the year's work has been the uniformly satisfactory work of the teachers in completing the preliminary examination of the children."

CLOSING SCHOOLS AS A MEANS OF CONTROLLING EPIDEMICS.

The following resolution was adopted by the American Health Association at its annual meeting in October, 1917:

Resolved, That it is the sense of the American Public Health Association that the Federal Bureau of Education should attempt to discover what is proper practice as to continuing or closing the schools as a means of controlling epidemics of measles, whooping cough, scarlet fever, diphtheria, smallpox, and poliomyelitis, and that they should publish their conclusions in the annual report of the Bureau and in bulletin form.

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[1] See reports of superintendent of schools, Holyoke, Mass., for the years 1915, 1916, and 1917.

This service was accepted by the Bureau of Education upon the condition that a committee of the association be appointed to cooperate with the Bureau in carrying out the purposes of the resolution.[1]

The following is a summary of the preliminary report of the committee:

Scope of inquiry.—The committee decided to limit the inquiry to the following three lines: (1) Summary of State laws bearing upon the question; (2) review of literature on the subject; (3) inquiry to be sent to 50 selected cities covering regulations, rules of practice, and results.

1. *State laws.*—An incomplete survey of State laws shows very few specific statutory references to the matter; rather general authority to control is vested in an administrative body.

2. *Review of literature.*—Review of more than 150 papers published during the past 20 years in journals, in official reports, and as chapters of books shows progressive abandonment of faith in, and the practice of school closure as a measure of controlling epidemics affecting school children. Yet even in recent literature there are still some expressions of opinion in favor of closure under special conditions. Analysis of these special conditions shows that they are of three types:

(1) Etiology of the disease unknown, e. g., in epidemics of infantile paralysis, epidemic meningitis, and possibly a few other diseases, it may occasionally still be necessary to resort to closure of schools.

(2) Severity of an epidemic that defies all efforts at control.

(3) Inadequate medical supervision of schools.

With these qualifications, the consensus of judgment in the literature reviewed may be summarized as follows:

The closure of schools is an extremely clumsy, unscientific, and unsatisfactory method of controlling epidemics among school children. It results not only in loss of school time and money, but it fails to control, inasmuch as infected children are at large, playing in the street, without restriction, and therefore spreading the infection.

The modern method, consisting of careful daily inspection of infected schools, isolation of sick children, and quarantine of contacts is both more effective and more economical.

Closing of schools should be considered as a last resort, to be used only when thorough and systematic application of other measures fails to effect control.

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[1] The committee consisted of Dr. W. C. Woodward, health officer, Boston; Dr. F. G. Curtis, health officer, Newton, Mass.; Dr. Bernard Kahn, acting director of medical inspection of public schools, Philadelphia; Dr. T. Clark, U. S. Public Health Service; Dr. W. S. Small, Bureau of Education, chairman.

It is also recognized that in sparsely populated rural areas, where aggregation takes place only in the schools, closure may be necessary. It is further recognized, however, that this condition would yield to adequate inspection.

3. *Inquiry in selected cities.*—An inquiry consisting of 14 questions was sent to 50 cities in 31 States. Replies were received from 32 cities in 19 States. The questions covered the following items: Laws or regulations providing for closure of schools in event of epidemic; extent to which closure is practiced; regulations governing exclusion of cases and contracts; frequency of inspection for discovering cases and supervision of contracts; home visitation for discovery of cases; extent and methods of disinfection; extent to which culture tubes are employed for detection of diphtheria carriers in schools and the Shick test for determination of immunes; laws and regulations governing vaccination; results of measures of control and methods of securing cooperation between school medical inspection service and local health authorities.

Minute examination of the returns, many of which were very full and explicit, confirms conclusions reported above from review of literature.

Successful control of contagious diseases in and through the schools is quite definitely correlated with the following conditions: Absence of closure; careful provisions for exclusion of cases and contacts, emphasis being placed upon clinical data rather than upon fixed period of exclusions; careful daily or frequent periodical inspection of schools; systematic home visitation; reliance upon natural and physical cleansing rather than upon chemical disinfection.

Without exception the cities that report reliance upon these measures report that they have had no occasion to close schools since such measures were adopted. On the other hand, the cities reporting inadequate measures of inspection also report reliance upon closure and disinfection by chemicals. The two following cases are typical. The cities are nearly the same size.

CITY A.

1. Regulations require closure for all the diseases specified except whooping cough.
2. Rigid period of exclusion of cases.
3. Rigid period of exclusion of contacts.
4. As much daily inspection as can be given by four physicians and one nurse for 40,000 children.
5. Home visitation; "check every rumor as far as possible."
6. Disinfection is practiced by formalin fumigation and washing walls with strong solution.

7. No definite reply in regard to results except that closure was resorted to twice last year, and that by utilization of teachers and principals there has been a reduction of the preceding year's record of active cases.

CITY B.

1. No law, but power has never been questioned.
2. All contagious cases are excluded until personally examined by epidemiologist.
3. Contacts are excluded at the discretion of the epidemiologist.
4. Nurses inspect daily; doctors on call.
5. Nurses investigate all suspicious cases.
6. Do not practice disinfection.
7. Methods of control seem to be satisfactory. In the four years since adopted, no occasion to close schools and very few recurrent cases.

CONCLUSIONS.

1. Closure of schools as a means of controlling epidemics of the six diseases specified is unnecessary, unscientific, and unjustifiable.

2. Disinfection by fumigation is unnecessary and ineffective. The use of chemical solutions is generally unnecessary. Disinfection by air and sun and cleansing with hot water, soap, and scrubbing is to be commended.

3. The proper method of control involves sufficient inspectorial force of physicians and nurses to maintain close supervision of cases and contacts; enforcement of isolation and quarantine under elastic administrative regulations; the employment of clinical and laboratory tests and reliance upon such data; close correlation of the school medical inspection, on the one hand, with the health department, and, on the other hand, with the school forces; and continuous education of the public.

4. The wide diversities in rule and practice revealed by this study should be eliminated or reduced. It is unreasonable, unscientific, and absurd that there should be such variations in the minimum period of exclusion as from 14 to 42 days (scarlet fever). This is nearly typical of many variations that could and should be eliminated. They do not depend upon adequate or inadequate support of medical inspection; they depend solely upon ignorance, indifference, or unreasonable difference of opinion. Much of this diversity would be eliminated by acceptance by all school health officers of the standards set up in the report of the "Committee on Standard Regulations for Control of Communicable Diseases," submitted to, and adopted at, the 1917 meeting of the Public Health Association. (U. S. Public Health Service: Public Health Reports, October 12, 1917.)

EYE HYGIENE.

The report of the Provost Marshal General on the First Draft under the Selective Service Act stated that "the specific source of defect showing the largest percentage of rejectives was eyes," 21.68 per cent. It is to be remembered that this was prior to the promulgation of the regulations providing for "limited service." The second report of the Provost Marshal General[1] shows that of "Grade D disqualified for any military service," 10.65 per cent were rejected on account of eye defects. The percentage of men relegated to "limited service" on account of eye defects is not given, but obviously it was large. From the point of view of military efficiency, as well as from the point of view of industrial efficiency and of general human welfare the conservation of vision is still "one of the most serious problems of educational hygiene."[2] The most important contribution to this subject since 1916 is a survey of the causes and extent of defective vision as related to school environment and of effective methods for prevention and correction made in New York in 1916–17, by Mr. J. H. Berkowitz for the Bureau of Child Welfare of the Association for Improving the Condition of the Poor. This study covered the nature and extent of defective vision in school children; the preventable causes of defective vision within the schools and the factors in school life contributing to deterioration of eyesight; conservative and preventive measures; clinical facilities for correction of eye defects and agencies for supplying glasses to needy children; and necessary improvements in facilities and methods in these various fields. Intensive investigations were made in a large number of classrooms of physical conditions and school practices relative to eyesight. The facilities and methods of the municipal and privately owned clinics and dispensaries were carefully investigated. A limited inquiry was made into the follow-up methods.

In final form the report[3] of this survey included not only the results of the investigations in the New York schools but also data from about 40 other cities in the United States and from foreign cities, summaries of important earlier investigations, appendices (text of important reports difficult to obtain), and bibliography.

ORAL HYGIENE.

As was to be expected from our knowledge of the condition of teeth of school children, a large amount of dental disease was found among the drafted men. The percentage of rejections for this cause was not large: 8.50 per cent in the first report of the Provost Marshal

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[1] Operation of the Selective Service System to December 20, 1918.

[2] Report of the Commissioner of Education, 1916, ch. 19.

[3] This report is soon to be published as a bulletin of the Bureau of Education.

General, 5.69 per cent in second report; but it is stated by Dr. Fones,[1] as result of his work with men stationed at Bridgeport, that "the appalling need for prophylactic work among these soldiers and the interest and willingness of the men to have this treatment can hardly be realized." Thus the need of systematic work for the conservation of the teeth of school children is again emphasized.

This work must be both prophylactic and reparative. In most cases where dental clinics have been established in the schools, the emphasis is upon reparative work for indigent children. As an educational project, however, obviously emphasis should be placed upon prevention and conservation.

PREVENTION EMPHASIZED.

Bridgeport, Conn.—Arguing that it is impracticable to repair the decayed teeth of all the school children and that it is repugnant to American ideas to dispense charity in the public schools, Dr. Alfred C. Fones, of Bridgeport, has sought to "evolve a plan for the prevention of dental decay and the establishment of clean mouths as an active part of our great free educational system."

Following is the substance of the plan as reported by Dr. Fones in the third year of operation:[2]

> We have tried to work out this plan in Bridgeport, and after three years we find that our educational and preventive dental clinic is the most important part of our school and health systems. Under the plan of this clinic every child undergoes an examination of his mouth and receives a prophylactic treatment of his teeth, accepting it as much a part of the school curriculum as his geography lesson. Every child is taught a method of brushing his teeth and is educated in the care of his mouth just as he is taught physiology or calisthenics. In this way the municipality accepts one-half the responsibility of aiding and educating the children in the prevention of dental decay, while the home care of the mouth and proper feeding is assumed by the child and his parent.
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> The work of the clinic is divided into four distinct parts. First, the actual cleaning, polishing, and examination of the children's teeth in schools. Second, the tooth brush drills and classroom talks. Third, stereopticon lectures for the education of children in the higher grades. Fourth, educational work in the home carried on by special literature to gain the cooperation of the parents. It may be well at this point to make clear to those outside the dental profession what a prophylactic treatment really is. It consists mainly in the thorough cleaning, by means of orange wood sticks in hand polishers, of every surface of every tooth. This means the removal of all stains and accretions on the teeth and especially of the sticky, mucilaginous films known as bacterial placques, which are the initial stage of all dental decay. The importance of removing these placques can thus be readily understood. This work of prevention of dental decay is essentially a woman's work, and to the dental hygienist it opens up paths of usefulness and activity in helping humanity in masses.

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[1] "An Educational and Preventive Dental Clinic." Nat. Dental Assoc., 21st An. Sess., Oct. 23–26, 1917.

[2] Mouth Hygiene for U. S. Soldiers, Nat. Dental Assoc., 21st An. Sess., N. Y. City, Oct. 23–26, 1917.

In 1913-14 we trained the first class of dental hygienists in Bridgeport, and two of these women were selected as dental supervisors when our clinic started in the fall of 1914. We had received $5,000 to carry on a demonstrating preventive clinic for the children of the first two grades of our schools, and our corps consisted of 8 dental hygienists and 2 supervisors. In but one year our city officials were so impressed with the results of our work that the appropriation was doubled, the corps enlarged, and a woman dentist added, and now, the fourth year of our clinic, we have a corps of 20 dental hygienists, 2 supervisors, and 2 women dentists, and an appropriation of $21,529. The money is appropriated through the board of health and the clinic is conducted by a subcommittee of this board.

Time will not permit giving a detailed report of our clinic from its start in 1914, but it may be said that the system now employed is very similar to that used originally.

The dental supervisors oversee and direct the work of the dental hygienists, give classroom talks, toothbrush drills, stereopticon lectures, attend to the distribution of literature to children and supplies to the hygienists, and arranging for the moving and location of hygienists in each school.

The work of the dental hygienists consists in making the examination and records of the teeth, giving the prophylactic treatments and instructions in the home care of the mouth.

When the equipment is placed the hygienist begins work for the children of the first grade and takes each grade in succession through the fifth. The charts are made of each child's mouth, one for the parent and one which is a permanent record for the files, showing the conditions found in the mouth for a period of five years.

Aside from the actual cleaning of the children's teeth, the work of the supervisors with tooth brush drills is considered very important, and every effort is made to present this phase of mouth hygiene to the children in a way that will be educational and interesting. It has been quite a problem to secure a good brush that can be sold for 5 cents, and up to the present time nothing better has offered than factory seconds of a good make of brush.

On the day preceding a toothbrush drill a notice is sent to the parent requesting that the child be allowed to bring his tooth brush to school, and that it be securely wrapped in clean paper. Announcement is made in the classrooms that any child may purchase a new toothbrush for 5 cents. The drill proper is given with the children seated, while the assistants pass up and down the aisles helping the children to hold the brushes correctly and to make the right movements. There are four positions for holding the brush and two movements in each drill. The children brush to count in a stereotyped form, it being *intended to teach merely the correct form of brushing and not meant for the actual cleaning of the teeth* which would require running water and dentifrice. A second talk is given up to the care of the brush and the necessity of hanging it in a clean place. The children repeat the drill standing, and the brushes are wrapped in clean waxed paper to be taken home.

It is hardly possible to estimate the educational value of the toothbrush drill in the classroom. It is accepted by the children as part of the curriculum, and therefore something to be learned and remembered. The teachers have aided in many ways to assist the children in forming the habit of daily brushing.

When the children of the first and second grades receive their first treatment, it is frequently found that while many of the deciduous teeth are decayed, the few permanent teeth erupted at that age are sound, with the exception of the six-year molars. The very first small cavities are just appearing in these teeth, and we believe that the small children entering the prophylactic system should all start on the same basis, that is with sound permanent teeth. We have two women dentists who work with the hygienists in our schools and confine their efforts to the filling of the first permanent molar teeth. We term this preventive dentistry also, as the effort is made to thus prevent the development of large cavities in these, the most important teeth of the denture.

As yet we are not fortunate enough in Bridgeport to have a free dental clinic for the poor, but the work is now progressing rapidly on a welfare building where such a clinic will be conducted. In the meantime the board of health employs a centrally located dentist to relieve toothache for any child in our public schools presenting the relief cards issued by the dental committee through the school principals, but no attempt is made to do any reparative work.

REPAIR WORK EMPHASIZED.

The following facts in regard to plans and cost of operation of dental clinics in four cities were gathered by the District of Columbia Dental Society in the autumn of 1917:

Philadelphia.—There are eight free dental clinics for school children, four of which are located in public schools and four in health division centers of the Bureau of Health. The entire staff in the dental dispensary consists of: (*a*) Chief of dental dispensaries. (*b*) Thirteen assistants. (*c*) One attendant.

The cost is $15,000, divided as follows:

$9,100	for salaries of assistants, $700 per year each.
2,500	for salary of chief of dental dispensaries.
900	for salary of attendant.
2,600	for maintenance and supplies of clinic.

No specific number of children is allotted to a clinic. Each one takes care of as many as possible. During the month of May, 1917, 2,370 visits were made by children to the clinics, an average of nearly 300 per clinic per month. The children are brought to the clinics by school nurses, parents, older children, probation officers, and others. The assistant dentists receive $300 a year each for three hours of continuous working service per day.

Chicago.—Chicago supports nine full-time and four part-time clinics. The budget for 1917 provides $11,000 for salaries and $1,500 for supplies.

Each clinic cares for an average of 10 or 12 children daily. In 1916, the report on dental service showed: New cases, 7,049; treatments given, 30,749; fillings, 28,877; crown and bridge work, 63; extractions, 20,554; visits of dental surgeons to dental clinics, 2,191.

Children are selected for treatment in the dental clinics upon the basis of examination given by school health officers. The parent is advised of defects found. School nurses follow up these cases, and if parent can not afford to pay for a private dentist the nurse arranges to take the child to a dental clinic. The child is entitled to free dental work if the income of the family is $3 or less per person per week. The nurse collects eligible children at her school and takes them to the dental clinic and brings them back again. Nurses are scheduled to dental clinics according to an arranged program.

The school dentists receive $100 per month 10 months of the year. The hours are from 9 a. m. to 3.30 p. m., with one hour for lunch.

Cincinnati.—The health department and the oral hygiene committee of the Cincinnati Dental Society, in connection with the public-school department, operate three free dental clinics for the benefit of public and parochial school children whose parents are unable to pay for dental services. The movement was launched about eight years ago by the Cincinnati Dental Society and was financed entirely by this organization until 1912. The oral hygiene committee still supplements the insufficient appropriation made by the city. The city budget provides $4,500; the balance is made up by the oral hygiene committee. There is well planned dental inspection once a week in some schools, conducted by members of the Cincinnati Dental Society. Children who are in need of dental services are referred to their dentists, but if unable to pay can take advantage of free clinics. Reasonable effort is made by principals and teachers to minimize the abuse of charity, and they must certify that the cases are worthy of charity.

The dental operators are paid at the rate of $50 per month for three and one-half consecutive hours per day. The pay of the dental assistants is from $500 to $720 per annum.

Detroit.—All free dental work is done under the direction of the board of health. At the present time there are 12 clinics in the city. These clinics are located in school buildings, hospitals, settlement houses, and one in the board of health building. There is a fund of $20,000 to maintain these clinics, and from this fund the salaries of the inspectors who examine the mouths of children of school age twice yearly are paid. During the past fiscal year some 20,000 children were treated in these clinics. No social service division is maintained in this department, but dependence is made upon the school teachers and nurses to " tip us off " when we are being imposed upon.

Salaries of operators as follows: $1,000, $1,200, and $1,800 per year, respectively; half-time inspectors, $50 per month. Clinic assistants are employed at the rate of $40 per month.

STATE LEGISLATION FOR PHYSICAL EDUCATION.[1]

Within the past three years, eight States have enacted laws providing for State-wide physical education, namely, Illinois in 1915; New York in 1916; New Jersey, Nevada, Rhode Island, and California in

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[1] See Bureau of Education Bulletin, 1918, No. 40, " Recent State Legislation for Physical Education."

1917; Delaware and Maryland in 1918. In six other States, Massachusetts, Connecticut, Pennsylvania, Nebraska, Ohio, and Colorado, legislative attention has been given to this matter, but no legislation has yet been enacted. In New Jersey and Massachusetts special commissions made exhaustive investigations and reports as the basis for legislative action. Though this legislation in all but two States was enacted prior to the current year, it did not become effective until this year, except in New York and Illinois. In New York, however, the law was amended in 1918 so that the law in final form will not be in full effect until 1918–19.

The most significant feature of this legislation is the broad and comprehensive interpretation of physical education given either in the statutes themselves or in the administrative programs adopted by the State departments of education. In the New York program physical education is interpreted as covering: "(1) Individual health examination and personal health instruction (medical inspection); (2) instruction concerning the care of the body and concerning the important facts of hygiene (recitations in hygiene); and (3) physical exercise as a health habit, including gymnastics, elementary marching, organized supervised play, recreation, and athletics." In the California statute the aims and purposes of the physical education are specified: "(1) To develop organic vigor, provide neuromuscular training, promote bodily and mental poise, correct postural defects, secure the more advanced forms of coordination, strength, and endurance, and to promote such desirable moral and social qualities as appreciation of the value of cooperation, self-subordination, and obedience to authority, and higher ideals, courage, and wholesome interest in truly recreational activities; (2) to promote a hygienic school and home life, secure scientific sanitation of school buildings, playgrounds, and athletic fields, and the equipment thereof."

The Rhode Island syllabus states that "Physical education may be defined as including healthful, sanitary environment; medical inspection; instruction in physiology and hygiene; and exercise in the form of such motor activities as marching, gymnastics, dancing, supervised play, and athletics."

With the exception of the Nevada law, all of these State laws provide for compulsory physical education in all their public schools. The most notable weakness is the failure to provide adequate financial support for administration and supervision, and the failure to provide administrative means for making the laws locally effective.

The results of the first year under the new law in New Jersey are summarized by the State commissioner as follows:

> Physical training, systematically taught this year for the first time in many schools, will be more effective next year. It has already enlivened the schools,

created new enthusiasms and contributed to the welfare of children and teachers. * * * The public needs to realize that money expended for health education, both rural and urban, is money better spent than for almost anything else. * * * We need not only better medical inspection, but also more school nurses, in country as well as in city. It can not be said with emphasis too great that physical training is preparedness. Its purpose is no other than to increase our man and woman power.

THE NATION'S NEED OF PHYSICAL EDUCATION.

The war has suddenly revealed to us and to all other nations the basic value of human life. It is no longer merely the voice of the philanthropist crying in the wilderness the doctrine of the individual's right to abundance of life; it is the Nation in its hour of crisis demanding the fullest physical capacity of all its men, women, and children. "The truth is pounded home with every succeeding engagement on land and sea that the conservation of human life is now a part of practical affairs, something to receive its place in the everyday consideration of those responsible for national progress." In war's terrible markets human life is the basic legal tender. Money, munitions, ships, and all the other essentials for the prosecution of war are but promissory notes.

This is recognized in the English education bill which at this date (June 30) is in the final stages of passage. It includes provisions for a comprehensive and thorough program of health conservation and physical education. This program covers adequate medical supervision both of children in school and children in industry, and physical education in all elementary, secondary, and continuation schools, and the provision of proper equipment for the same, and provision for physically and mentally defective children.

In France, a strong committee has been formed, of which several members of the Chamber of Deputies are members, for the study and promotion of physical education, social hygiene and race conservation. The committee proposes to cooperate closely with the public authorities, the universities, the faculties, the commercial centers, the industrial centers, the financial powers, and the press.

Its program includes a general method of rational physical instruction; a system of schools of physical education for instructors of the Army and of both sexes; simplification of school programs and introduction of a physical test in all examinations; emphasis upon outdoor exercises; outdoor schools and open-air colonies for physically abnormal children; complete reorganization of school medical inspection; the employment of trained teachers of gymnastics; legislation restricting juvenile labor; and a larger place in the training for military service to physical education and athletics.

In this country, likewise, we are recognizing that physical efficiency of the citizens is not only a matter of individual or local or

State concern, but also a matter of supreme national concern. The fact that the first draft figures show a wide variation in the percentage of physical effectives that the States can contribute to the national defense—an extreme variation of 33 per cent—lifts the question at once into the field of national statesmanship. The experience of the training camps is a conclusive demonstration of the need of a national program that shall produce not only physically sound but also physically educated citizens.

President Emeritus Eliot, of Harvard, in a weighty address on "Certain Defects in American Education" (Teachers' Leaflet No. 5, Bureau of Education, June, 1918) states the case clearly and forcefully:

> To secure for every child in the country a complete course of physical training is a great national object in war times and peace times alike, and part of the expense of the course should be borne by the National Government. The Swiss Federal Council prescribes the program of physical training for every school in Switzerland, and appoints and pays the national inspectors who see that this program is carried out. The federation also makes a small contribution to the cost of this training throughout the Republic. The war with Germany has already taught us that the United States should henceforth and at once do the same thing in aid of the much larger expenditures of the States and the municipalities on the same all-important subject, and should make sure that the training is actually given. When a proper course of physical training has been in operation in the United States for 12 to 15 years, the productiveness of the national industries will show a great increase, and the young men who are to fill the permanent Army and Navy of the United States will come to the annual mobilization with bodies already fit for the work of a soldier or sailor.

The commission on the national emergency in education of the National Education Association emphasizes strongly the importance of physical education and health conservation in its program for Federal legislation.

In its bill providing for the creation of a department of education and the encouragement of the States in the promotion and support of education, it specifies that two-tenths of the $100,000,000 asked shall be devoted to physical education and instruction in the principles of hygiene and sanitation, and for providing school nurses, school dental clinics, and otherwise promoting physical and mental welfare.

The American Federation of Labor in its educational program includes the following planks:

> The provision of ample playground facilities as a part of the public-school system.
>
> Continuous medical and dental inspection throughout the schools.
>
> The organization and equipment of special classes for children who are subnormal, either mentally or physically, and also special classes for children who are found capable of making more rapid progress than is possible in a standard school.
>
> The establishment of complete systems of modern physical education.

Numerous patriotic, civic, health, and philanthropic organizations have taken a similar position. A national committee on physical education has been formed with purposes similar to those of the French "committee" already named. More specifically it is devoted to the promotion of State and Federal legislation for physical education. The committee, in its proposed program for Federal legislation, adopts the interperetation of physical education as illustrated in the best recent State laws. "It assumes physical activity as the basic thing, but conditioned upon, and integrally related with, wholesome physical environment, individual physical examination and record, medical supervision of schools and school children, development of health habits and instruction in health knowledge, hygienic school management and procedure, and cooperation with all agencies that make for physical upbuilding and the moral growth inevitably incident to sane, wholesome, active physical life."

It asks that physical education be for boys and girls alike; for all children between 6 and 18 years, inclusive, in all schools and in industry; for provision for investigation and demonstrations in the interest of progressively scientific standards; for Federal aid to the States and Federal cooperation in the administration of all State systems, but with guarantees of State autonomy and initiative.

The National Physical Education Service[1] has been established by the Playground and Recreation Association of America at the request of the national committee on physical education to organize and manage the movement for State and Federal legislation for physical education.

PHYSICAL EDUCATION AND MILITARY TRAINING.

Physical education as interpreted by the individuals and organization cited above is not a substitute for military training. With respect to boys, it is premilitary training. It is a program for producing physically fit men and women by physically educating boys and girls during the period of immaturity. The program stops at 18 years of age. Efficient military training can not begin earlier than 18 years. If universal military training should be adopted, this program would insure maximum preparation of a maximum number of young men for military training. It is preparatory to military training in the following ways: By the selection of boys fit for military training through recurrent physical examination during the growth period and the early detection and correction of remediable defects; by systematic training through graded systems of exercises adapted to children of different ages, through corrective exercises for postural and muscular defects, and through intensive physical training and athletics for the older boys; by systematic training into health habits and instruction in health knowledge; and by increasing the physical efficiency of those whose defects would confine them to limited service, through early detection of defects, through specialized training of such individuals, and through keeping them out of occupations for which they are unfit.

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[1] Headquarters, 818 Connecticut Avenue, Washington, D. C.

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 49

EDUCATION IN PARTS OF THE BRITISH EMPIRE

[Advance Sheets from the Biennial Survey of Education, 1916-1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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EDUCATION IN PARTS OF THE BRITISH EMPIRE.

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EDUCATIONAL DEVELOPMENTS IN THE DOMINION OF CANADA.

By WALTER A. MONTGOMERY,

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GENERAL EDUCATIONAL ACTIVITIES.

Certain educational activities are common to most, if not all, of the Provinces of the Dominion; and these will be considered in their general bearings before the local and individual problems of the several Provinces are taken up. Chief of these general movements are the following:

THE LANGUAGE ISSUE.

Having its roots deep in what is perhaps the greatest diversity of racial origins in the world, Canada's problem of solving the question of permitting the establishment and maintenance of schools giving instruction in other tongues than English presents difficulties even more complex than in any State of the American Union. According to immigration statistics, Canada has within the past 10 years received waves of immigration from 26 distinct racial entities. Fortunately, there is not to be noted a corresponding number of divisions of the language problem. The great majority are too few in number to segregate themselves solidly apart from the English and French populations. The groups which distinctively show and carry out such a tendency are the German, Polish, and Ruthenian. The bearings of the question on the social, economic, and political sides are, of course, manifold; but this treatment concerns itself only with its bearings upon education, and essentially upon the elementary phase. This field alone shows such diversity in the ways the problem must be solved by the individual Provinces as to call for a survey separately or by groups.

The situation in the Maritime Provinces of Prince Edward Island, New Brunswick, and Nova Scotia may be dismissed with slight notice. This group differs fundamentally from all the others in being essentially homogeneous in population. From considerations of geography, climate, and pursuits, immigration has uniformly passed them by. The situation is therefore the simple one of rivalry between the French and the English language. Despite a large proportion of Acadians left in each of these three Provinces, the religious and educational relations between the French and English have always been so amicable, and legal compromises have been so skillful, as to forestall all friction. Nova Scotia's settlement of the problem may be taken as typical. In that Province a special inspector (an Acadian) is provided for Acadian schools; brief summer courses in colloquial English are provided in the Provincial Normal College at Truro for French-speaking teachers; in the first four grades French readers are provided for French-speaking children, with instruction in colloquial English, and English-speaking teachers are not required to know French.

Proceeding westward, Quebec presents the problem of bilingual instruction distinctively along the line of religious faith; and her solution is eminently satisfactory of what might be, with less tactful handling, the most dangerous combination of religious and racial jealousies. The general line of cleavage adopted is, as may be expected, English for and in the Protestant schools, and French for and in the Roman Catholic schools, though a confusing element intervenes in the English-speaking Irish population of Quebec and Montreal. By wise provisions of the Protestant committee of the provincial board of education, French courses of study are included in those of the Protestant schools, being required from the fourth to the eleventh grade, and in the comparatively few French Protestant schools French is the language of instruction, with required courses in English. Similarly, the committee of Catholic schools provides for the use of French for instruction, and requires English from the first year in the great majority of such schools; and in the Catholic schools of Irish and English communities the converse provision is made. In the populous centers some Catholic schools use one language for instruction in the morning and the other in the afternoon; and in the Catholic superior schools the training in English is notably fine. The key which simplifies the situation is that the racial elements in Quebec are locally distinct. The hope expressed by the superintendent of public instruction the month the war broke out that local good sense and patriotism would overcome any difficulty has been amply fulfilled.

Geographically and in population Ontario has many points of resemblance to Quebec; but an important dissimilarity lies in the overwhelming majority of the English-speaking population (about 2,000,000) over the minority of all those speaking other languages (about half a million). Without anticipating the treatment of the strictly educational system of Ontario, it may be said that, barring the independence of religious schools found in Quebec, Ontario allows much the same language privileges to the minority. Historic traditions of sentiment and race loyalty clustering around the city of Quebec have always deeply impressed the French-speaking population in Ontario as well, and this feeling is even intensified by their being unable to have enacted into law such concessions as those enjoyed by their kinsmen in the Province of Quebec. Furthermore, a steady tide of the latter set in a generation ago into Ontario. The displacement of English-speaking farmers that followed served still further to widen the breach of race and language. Regulations of increasing severity requiring the teaching of English in all schools, passed by the Department of Education on the basis of recommendations made by a commission of inquiry, led in 1915 and 1916 to acute and in some localities disastrous situations in French schools and school boards. The trouble was settled in November, 1916, by the judgment of the Privy Council of the Dominion, which held that the right to the use of a certain language concerns only legislative or court use, and does not relate to education, but that the right to manage schools, as well as that to determine the language to be used in them, are alike subject to the regulations of the provincial education department.

In sharp contrast to the homogeneous character of the Maritime Provinces and to the absence of a serious language problem there, the prairie Provinces of Manitoba, Saskatchewan, and British Columbia show great racial diversity, due to successive waves of immigration which followed each other too rapidly to be assimilated. In Manitoba's estimated one million people are to be counted 19 racial units not speaking English, of which 6 number more than 50,000 each, with the aggregate estimated at 60 per cent of the total population of the Province. Some idea of the race diversity may be gained from the statement that the Bible is sold in Winnipeg in 58 different dialects. Of those speaking a language other than English, the most serious problem is presented by the German Mennonites, the Poles, the Russian Doukhobors, and the Ruthenians.

Manitoba, largely under the influence of the educational thought of the States of the American Union just to the south, frankly made no legal allowance for any system of public instruction other than the purely nondenominational; and she could therefore offer no such solution of the language problem as that reached by Quebec and Ontario. In 1896 a compromise was adopted by which, in localities where 10 pupils spoke French or other language than English (predomantly Mennonite), bilingual teaching must be provided; but the French Roman Catholics were not satisfied, and at Winnipeg and Brandon maintained separate parochial schools, besides paying regular taxes for public schools.

When the tremendous tide of immigration set in about 1902, each racial group took advantage of its legal rights under the above compromise. The climax was reached in 1915 when nearly one-sixth of the schools of Manitoba were bilingual—143 teaching French, 70 German, 121 Polish or Ruthenian, all in addition to English. The unwisdom (noted at the time) of the failure to adopt compulsory school attendance in Manitoba was now made apparent, especially in Ruthenian communities. The first relief afforded was the outright repeal (1915) of the clause requiring bilingual teaching when demanded by the parents of as many as 10 children. In Manitoba, then, as the situation now stands, no more bilingual teaching certificates are issued, and present holders are permitted to teach on the old ones until June, 1919, when they will be invited to qualify for regular certificates. English examinations for entrance to normal schools have been required since 1917, the substitutes of French or German grammar and composition having been abolished.

In Saskatchewan matters are similar to those in Manitoba. Of the alien elements, the Colony Mennonites, the Colony Doukhobors, the Ruthenians, and the Germans retarded unification by declining to send their children to the public schools which the law provides that the community itself may organize. Educational and social leaders have thought it best not to compel them, but to wait for the influence of new-world surroundings and the example of the independent branch of each religious sect to do their disintegrating work. The Ruthenians, who constitute the largest population in the northern part of the Province, and the Mennonites, among whom entire communities formerly evaded the law by simply not organizing the legal school district but establishing private parochial schools, offer each of them distinctive phases of the problem to be solved. Over these the provincial inspectors had up to 1917 no power whatsover. The new school-attendance act of that year, however, gave the department of education power to investigate all nonpublic schools and to apply legal pressure when needed, though the law leaves a serious loophole for evasion in not requiring "the parent or guardian to send the child to public school if the child is under instruction in some other satisfactory manner." Controversy over the interpretation of this clause must continue until further legal action settles it.

In Alberta the very large number of groups speaking other languages than English led to the appointment in 1914 of a supervisor of foreign schools, vested with large power of supervision and interference. Here, as elsewhere, the Ruthenian group gave most trouble, as they clung most tenaciously to their parochial schools. Because of the widely varying degrees of excellence found in the latter, the Government has steadily refused to recognize attendance at such schools as fulfilling the compulsory educational requirements. This policy, tactfully and yet unswervingly adhered to, has resulted in the closing of almost all the Ruthenian schools and of many German-Lutheran private parochial schools conducted by theological students from Lutheran colleges in the United States, which were considered as not reaching the prescribed standard of efficiency.

Last of all, and strange to say, parallel to the situation in the Maritime Provinces of the east, the extreme western Province of British Columbia presents no language problem, though showing wide diversity of racial groups, each of which is so small in numbers as to offer no trouble in the matter of language instruction in the public schools.

It may safely be concluded that the question of the language of instruction throughout the Dominion has steadily tended to a satisfactory adjustment since its injection as an issue of extremely bitter controversy six years ago. At one time threatening to disrupt boards and schools, notably in Ontario, it came to have applied to it the spirit of fair play characteristic of western democracy, and the general principle of the rule of the majority, tempered with concessions to local sentiment.

AGRICULTURAL INSTRUCTION.

Federal interest in agriculture has expressed itself in two parliamentary enactments:

1. The Agricultural Aid Act, passed in 1912, by the provisions of which the sum of $500,000 was distributed among the Provinces of Canada on the basis of population. While partly educational, the objects of this grant were also of a general social and economic character, with rural conditions fundamentally in view.

2. The Agricultural Instruction Act, passed in 1913, by the provisions of which ten million dollars was set apart to be divided among the Provinces for agricultural instruction during the ten years ending March 31, 1923. As the name implies, this act is preeminently educational, and its work falls under four divisions:

(1) The teaching in the public schools of the first principles of the sciences related to agriculture.

(2) The teaching of more advanced agriculture in agricultural colleges and schools devoting their attention to the training of teachers, investigators, and community leaders.

(3) The carrying on of extension work, having for its object the instruction of farmers by acquainting them through demonstrations and by other means with the results of scientific investigation and research.

(4) The amelioration of the conditions of rural life, particularly in so far as women and children are concerned.

These objects have been variously carried out in the several Provinces, but in them all the nature of the stimulus given to agricultural instruction has been much the same, being guided by the advice of local authorities who have in view urgent local and provincial needs.

VOCATIONAL WORK FOR RETURNED SOLDIERS.

The care of the returned Canadian soldier has devolved entirely upon the Military Hospitals Commission, established and given extensive powers by successive orders in council. This commission works together with a committee of both houses of the Canadian Parliament in the training and reeducation of wounded, disabled, and convalescent soldiers. In the system adopted, the training for new occupations of men who can not resume their former occupations—vocational reeducation—is the phase of deepest educational significance. Under this head, and responsible to the commission first named, nearly every Province has the following organizations:

1. A Provincial Disabled Soldiers' Training Board, which determines who are fit subjects for vocational reeducation.

2. A body having generally advisory powers for securing the coordination of local efforts and the cooperation of educational institutions.

3. Vocational officials in immediate charge of work in each locality under the Vocational Secretary of the Dominion, with headquarters at Ottawa.

4. Various organizations, such as the Returned Soldiers' Employment Commission, which have charge of placing the men in breadwinning occupations.

The efficiency with which all these agencies cooperate necessarily varies widely in the several Provinces; perhaps the finest illustration of the practical working of the general plan is to be seen in the western Province of Alberta, from which many of the first enlistments in the Canadian expeditionary force came. At the Military Convalescent Hospital at Ogden, military organization and discipline prevail. In addition to systematic treatment involving occupational therapy of the most modern type, specialized vocational reeducation is given in—

(1) Commercial courses of six months;

(2) Instruction of disabled soldiers, foreigners who had enlisted in the Canadian forces, in English;

(3) Civil-service examination courses;

(4) Manual arts;

(5) Gardening and poultry raising;

(6) Industrial trades along the line of the vocational survey of the Province of Alberta projected just as the war broke out, with instruction at the Provincial Institute of Technology and Art at Calgary, organized as a link in the general system of public instruction in Alberta, and for the present turned over exclusively to disabled soldiers.

Many problems of vocational training are here being worked out with remarkable success. The caliber of the students and the relation between them and the educational authorities may be seen in the fact that a students' council at the institute has powers of self-government, works out programs of study, recently voted for in increase in daily hours of work, and has frequently been asked for advice on the contents of courses. In March, 1918, the vocational training branch of the Provincial Invalid Soldiers' Commission had under its instruction more than 3,000 returned soldiers.

Dominion-wide interest in this world problem did not cease with the cessation of hostilities. At the convening of the Canadian Parliament in February, 1919, it was announced in the speech from the throne that bills would be submitted for the further promotion of vocational education in all its phases, and that a recent order in council had provided substantial increase of vocational pay and allowances to returning soldiers while undergoing such reeducation.

THE DOMINION EDUCATIONAL ASSOCIATION.

Perhaps the most vital bond of union between the Provinces from the point of view of teaching is the Dominion Educational Association. This includes representatives from each Province, meets annually in November, in Ottawa, and constitutes a clearing house for the interchange of educational ideas, besides contributing substantially to the growing federalistic consciousness. A few of the salient subjects discussed at its 1918 meeting will show the very valuable part it serves in educational progress: "The Improvement of School

Administration and Its Dependence on Changes in Legislation"; "The Fisher Bill of England"; "The Adolescent School Attendance Act of Ontario"; "Uniform Textbooks for Canadian Schools"; "The Relation of Technical to Complete Education"; "Education for the New World after the War"; "The Returned Soldier—What Can We Do for Him?"; "The Federal Government and Statistics on Education in Canada." Of late years it has invited leading educational thinkers of the United States to address it, notably the Commissioners of Education, and thus has come to have a distinctly international character.

THE MARITIME PROVINCES.

The three Provinces of New Brunswick, Nova Scotia, and Prince Edward Island, by reason of similarity of climate, industries, and population, constitute a distinct unit. Their educational problems and methods of solution are closely akin, as is evidenced by the flourishing maritime educational convention held annually for the discussion of topics of common importance, and marking each year a distinct growth toward solidarity. In many respects New Brunswick may be regarded as most progressive; and a survey of educational progress there will be largely representative of the other two. As in all the other Provinces, the service of the teachers and the educational machinery in the winning of the war continued unabated until the end, especial interest being taken in the organization of the Dominion work in education for Canadian soldiers overseas and in the projected establishment of educational facilities in England for soldiers detained there after the war.

The school laws passed within the two years showed marked increase in educational interest. The powers and responsibilities of school trustees were largely increased; the attendance of district representatives upon county or provincial teachers' or trustees' institutes was encouraged by defraying their expenses; reciprocity of teachers of corresponding grades with Nova Scotia, safeguarded by the certification of one of the other superintendents of instruction, was established; and superior schools in the seventh grade and upward were declared free to all pupils residing within the parish or parishes concerned. Most important of all, however, is the legislative act of 1918, defining vocational and prevocational education and schools, providing for provincial and local administration and control by a committee consisting of the Superintendent of Education, the Principal of the Normal School, the Secretary of Agriculture, the Director of Elementary Agricultural Education, and three others, including one representing capital and one labor, outlining the method of establishing schools and departments of vocational education, allowing provincial grants on the basis of equal appropriations of local taxes for designated instructions in this field; and finally, providing that no part of the annual vocational grant shall be given to any district, town, or city unless a compulsory school-attendance law has been adopted therein.

Closely related is the project having for its object the establishment of home efficiency clubs throughout the Province and the stimulation of the production of home-canned fruits and vegetables. Upon the inauguration of the system late in 1917 one hundred clubs were formed, with a total membership of 1,700 girls between the ages of 10 and 18 years. The aggregate production of these clubs was estimated in 1918 at 50,000 quarts of food canned or otherwise preserved. In May, 1918, the Board of Education formally recognized the movement by the appointment of a woman supervisor for girls' clubs. This official by the end of 1918 had over 200 active organizations under her direction. A striking feature of the movement also was the fact that many domestic-science teachers of the Province volunteered to help in this general work by giving up three weeks of their summer vacation. In 1918 these teachers were regularly employed by the Department of Education to visit the clubs during July and August. In preparation for this, short courses were provided in the normal school, with special regard to the local products and conditions of the districts to which individual teachers were assigned.

In the matter of increased production the Dominion-wide movement was promoted in New Brunswick by the schools in cooperation with the agricultural department. The inspectors were summoned to a conference, and the Province organized by the selection of the most suitable centers in each inspectorial district and the appointment of a committee in each. A stimulus was given to good scholarship by the provision that only boys whose school standing was satisfactory should be allowed to volunteer for this work.[1] Assistance was also lent by the Department of Education through the district organizations in the distribution of circular and seed-card estimates sent out by the Department of Agriculture.

With the purpose of securing data at first hand upon the extent and methods of free textbook distribution—always a much-mooted question in the Dominion—the superintendent of education in 1917 visited all the western Provinces, and embodied his findings in a report containing many other points of interest besides that of his immediate object. He found that free readers were supplied in all the Provinces west of Ontario, and free materials in some, free arithmetics, agriculture texts, atlases, and libraries in others; that Ontario supplied hand-books in each subject to each teacher; that British Columbia was the only Province supplying free textbooks throughout; that in Manitoba each district or municipality was allowed by law to supply its own texts free, with the prospect that this would shortly become compulsory; that an interesting sign of closer unity was seen in the fact that the four western Provinces had tentatively agreed to appoint composite committees to select uniform textbooks for all.

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[1] Similar departmental regulations were also issued in Nova Scotia.

NOVA SCOTIA.

Noteworthy in the educational history of Nova Scotia is the regulation adopted by the council of public instruction, compulsory from August 1, 1919, guaranteeing the raising of teachers' salaries and basing the minimum salary upon the average annual salary paid for the five years ended July, 1917. Ranging from $200, the lowest hitherto paid, up to $750, increases are graduated according to various percentages, assuring a minimum of $400 in future. The act is effectively safeguarded by the provision that—

> the license of any teacher engaging to teach in any section at a less salary than that defined above shall at once be suspended, and if any section engage a teacher at less salary than the above specified, such section shall forfeit its share of the muncipal fund and shall not be regarded as having a legal school.

PRINCE EDWARD ISLAND.

Legislation in this Province showed marked progress in the following amendment to the section of the Public Schools Act designating the requirements of voters at school meetings:

> Notwithstanding anything in this act or amendments thereto, every married woman or widow having one or more children of school age in actual attendance at the school shall be a qualified voter at all school meetings in respect of all matters and things cognizable by a school meeting and shall be eligible for election as school trustee.

In accordance with this amendment women have been elected and promptly qualified and have thus come in closer touch with the needs and improvement of the schools.

The compulsory attendance clause of the school act has also been strengthened by the following amendment:

> Every person having under his control a child between the ages of 8 and 14 shall annually during the continuance of such control send such child to some public school in the city, town, or school district in the county in which he resides at least 30 weeks if such person resides in the town of Charlottetown or Summerside and 20 weeks if he resides elsewhere in the Province.

The enforcement of this provision was made obligatory upon all boards of trustees.

QUEBEC.

Any adequate survey of educational progress and conditions in the Province of Quebec must be based upon a clear understanding of the unique legal character of its public school system. This includes a twofold organization which follows sharply the lines of the two dominant religious faiths, with each division entirely independent of the other. The final control and direction of the Roman Catholic schools are vested in the Catholic committee of the council of public instruction; those of the Protestant schools in the corresponding Protestant committee. Both are under a common superintendent of public instruction for the Province, who is ex-officio chairman of both, though he usually delegates the actual power in one or the other committee, and to whom each inspector general submits an annual report for transmission to the secretary of state. Each committee works primarily through its inspector general, whose powers are entirely derived from it. In matters of common import the committees combine either in whole or in part.

The great majority of the schools of all grades in the Province are Roman Catholic—in 1916–17, 6,562 out of a total of 7,289, enrolling approximately 430,000 pupils out of a total of 500,000. Among the administrative acts of the Catholic committee for the past two years was their declaration in favor of forming classes to prepare young pupils for the first-year course of study in the primary schools, and the issuance of a certificate of studies upon the completion of the elementary, intermediate, and superior courses:

> There is question at this time of a new distribution of the subjects included in the courses of the elementary and model schools, in such a way as to eliminate those which are not absolutely necessary for these schools, and to distribute the subjects over seven years of teaching.

The Catholic committee also instructed its inspector general to initiate a close investigation of the condition and needs of the Catholic schools of the Province, and early in 1917 he made the following recommendations:

1. That the course of study in elementary schools be more effectively carried out, rather than have additions of subjects or time.
2. That the importance of the training of very small children in preparation for the first grade of elementary course be recognized and more attention be paid to it.
3. That the men and women teachers of the Province be stimulated to greater professional efficiency both in preparation and in permanency in the same school.
4. That the number of schools under the direction of male teachers be increased in all possible ways.

THE EFFECTS OF THE WAR.

As regards the practical operation of the schools of Ontario, the effects of the war have been pronounced in the following respects:

1. In diminishing the normal supply of teachers. According to the report of the chief inspector of public and separate schools, not only have—

> A considerable number of teachers enlisted for service overseas, but a much greater number have withdrawn to more lucrative positions with fewer responsibilities. The loss to the Province, not counting the cost of educating these teachers, is sufficient to cause serious alarm to the authorities of the elementary schools. The obvious and manifest remedy for this state of affairs is to insist that boards of trustees shall adjust the salaries of their teachers to the increased cost of living and to the increased wages now earned in other occupations. Unless a very considerable increase in salaries of teachers is made, a still more serious condition will arise. Not only will the service of the teachers now engaged be lost, but students will cease to be attracted to the teachers' training schools.

2. In decreasing the amounts expended for the improvement and construction of school buildings. The inspector just quoted, however, finds a compensating advantage which has made for better school buildings and better school grounds, viz, the better organization of community life and a tendency to regard the school as its center, a movement which had its beginning in the demand made by the war for a higher standard of physical efficiency and its revelation of hitherto unsuspected but widely prevalent physical defects through the reports of the Army medical examiners.

3. In increasing the difficulty of securing the punctual and regular attendance of pupils at schools. On this point the same inspector reports that the arrangements effected by regulation two years ago in view of the exigencies of the war have left something to be desired in the way of more specific regulations to compel attendance. The truant officer provision has not been found satisfactory: "With the increased cost of wages the temptation for parents to withdraw their children from school, especially where fruits and vegetables are grown, has necessarily increased."

CONTINUATION SCHOOLS.

The continuation schools have grown steadily during the past two years. In spite of difficulties of accommodation and equipment, the favoring regulations and the liberal system of provincial grants made to this type of school have advanced their usefulness, though with the confusion incidental to the war only the largest centers have as yet such schools in full operation. The inspector of the district which enrolls the largest number of such schools advocates making it obligatory that every continuation school employing two teachers ability are constantly afforded more attractive careers in our own Province as trained nurses and as stenographers and typewriters in banks and business offices. The war has intensified this demand, and an inadequate supply of trained teachers is not only evident now throughout the Province, but is bound to become still more inadequate in the immediate future. * * * The example of the British Parliament in adopting a great progressive educational policy involving increased expenditures in war times is one to be followed.

ONTARIO.

THE SUPERANNUATION ACT.

The most important piece of educational legislation of the Province of Ontario during the past two years was the teachers' and inspectors' superannuation act. Its main provisions are as follows: (1) The assessment of 2½ per cent upon the salaries of teachers and inspectors with an equal sum contributed by the Province, the said payments to be deducted from the legislative school grants and to be placed to the credit of the superannuation fund, and to be deducted finally from the individual salaries; (2) pensions based on length of service and amount of salary, the minimum being $365, and the maximum $1,000 per annum, with the requirement of a minimum of 30 years' experience or 15 years if retirement is caused by ill health; (3) a controlling board composed of an actuary, two other persons appointed by the minister of public instruction, and two teachers or inspectors, active members of the Ontario Educational Associaton and regularly elected by that body.

PROPOSED LEGISLATION.

Of great importance, also, is the introduction of the following bills in the legislative assembly of the Province:

1. The bill for the establishment of a system of consolidated schools, following closely the lines of corresponding legislation in the prairie Provinces, where such schools have for some years constituted the basal feature of rural school administration. It is still (April, 1919) pending, but is regarded with universal favor, and is certain to pass. It marks a long step forward in elasticity of rural school administration.

2. The adolescent school attendance bill, making compulsory part-time school attendance of boys and girls between the ages of 14 and 18. It provides that adolescents between 14 and 16 must have 400 hours of education each year, and those between 16 and 18 have 320 hours, and that they can not secure employment unless they shall have obtained certificates that they have complied with the law or are exempt for legally specified cause. Urban centers of 5,000 population or over must provide for adolescent school courses.

reaching as these do boys and girls under 14 who can not be given such training in the public schools, and who have not the maturity of mind to do successful night-school work. This branch of education has also received great stimulus from the attendance of returned soldiers in trade and technical classes, this having been affected by arrangements with the Dominion agencies already mentioned, which used the already established courses for the re-education of disabled soldiers.

AGRICULTURAL EDUCATION.

Mention has been made of the disappointment felt in certain quarters over the failure of the continuation schools, as originally contemplated, to develop agricultural instruction as its chief feature in rural schools. According to the report of the inspector of elementary agricultural classes, this type of instruction has steadily overcome difficulties, and wherever it has been established as a regular subject of the public-school curriculum it has maintained itself and steadily grown in public favor. Perhaps the most conspicuous proof of the part agricultural education is coming to play in the Province is seen in the school fair exhibits held in the rural districts, and serving by means of the appeal to local productions, interests, and the awarding of prizes for excellence along agricultural lines, to arouse and maintain a social solidarity unknown until their introduction. By regulation school fairs are formally organized under the direct charge of the district representative of the department of agriculture of the county in cooperation with the public school inspector. According to the report of the supervisor of district representatives:

> The special features in many places are the live-stock judging competitions, for teams of three boys from each school, who are asked to judge two classes of live stock, generally beef or dairy cattle and heavy horses; the public-speaking contests in which from 2 to 10 boys and girls compete; the boys' and girls' driving contests, which include rapidity and skill in hitching and unhitching; the school fair parades; physical drill under the Strathcona trust; weed and apple naming contests, and the exhibition of calves and colts by boys who had spent considerable time training their pet animals.

The call made each spring for increased food production, issued by the ministers or superintendents of public instruction throughout the Dominion, resulted in Ontario as elsewhere in a tremendous stimulus to formal instruction in agriculture. A large number of the schools undertook school garden work for the first time with very gratifying results. By ministerial regulation the duties of inspectors were still further increased in the promotion of agriculture, horticulture, and manual training and domestic science especially adapted to the requirements of farm life, and it was made the duty of each public and separate school inspector to inspect half-yearly the teaching of agriculture and horticulture in the schools of his inspectorate, and to make a special report thereon to the minister and the school boards. By the regulation of 1918, special grants were offered to school boards and teachers of lower and middle schools for satisfactory work in agriculture and horticulture, and to rural and village schools for classes maintained in manual training as applied to the work of the farm or in household science suitable to the requirement of rural districts, where a qualified teacher is employed, and accommodations, equipment, and a course of study approved by the minister are provided.

MANITOBA.

DEMOCRATIC METHODS.

The transition is abrupt from the close centralization of the public school system of Ontario to the thoroughly democratic system of Manitoba. Each is the outcome of peculiar social and political conditions. In Manitoba, as in the adjacent sister Provinces of Saskatchewan and Alberta, conditions of life are largely rural, and they have fashioned educational machinery to their own liking. The unity of the interests of these three Provinces is so generally recognized that in May, 1918, their ministers and deputy ministers met at Calgary, in Alberta, adopted uniform textbooks in most of the public and high school courses, and provided for a training course for teachers of the first and second class certificate which should be 33 weeks in length, the completion of grades 11 and 12 being prerequisite to admission to it.

Contrary to the municipal unit, which is the basis in the Provinces to the eastward, the unit of educational organization in Manitoba is the school district, ranging in area from 16 to 25 square miles, with the legal provision by which the district can be organized with 10 school children. The several district and municipal boards have absolute power in the financial support and physical upkeep of the schools and in the selection of teachers, subject only to the general supervision of the ministry of public instruction. Remarkable elasticity in administration is secured by the provision of the public-school act by which a municipal school board may be established in any municipality where the electors so desire. In addition, any rural council may, and on petition of 15 per cent of the electors shall, submit a by-law at any municipal election for the purpose of ascertaining the wishes of the people in the matter, upon the passing of which law trustees are elected who are required to take over the whole matter of administration of the schools, the original school districts being dissolved, and the new board possessing all the powers provided in the act for boards of rural school trustees.

An important feature of the latter is the appointment of an official trustee to take charge of school districts which can not be satisfactorily managed by a regular board of school trustees. This system has been attended with marked success; and in the work of organization and management the services of the official trustee have in many cases proved invaluable. The trustees in their turn have combined during the past two years in provincial and local associations, opening the way to united action along many lines and securing a broad attitude toward educational problems which would otherwise have been impossible or at least long delayed. The activities of the official trustees have been especially commended by the inspectors of the districts. The Manitoba Educational Association has recognized the great part they play and has created a special section known as the trustees section of the association.

THE ADVISORY BOARD OF EDUCATION.

On the academic and scholastic sides a unique feature in the systems of the western Provinces is the advisory board of education. In Manitoba this organization dates from 1890, and is regarded by the people of the Province as having furthered the progress in education more largely than any other agency. With its activities it has grown in membership from 7 to 31, one-third of whom in 1916 had served in various departments of practical educational work, and the remainder represented agriculture, the industries, and the professions. The board touches practical education most closely in the following respects:

1. It grants to teachers professional certificates, and has steadily raised the requirements therefor, culminating in the regulation effective July 1, 1916, which requires candidates for normal school teacher training to have completed three years of high-school work, thus making the scholastic preparation of teachers identical with that required for entrance to other professional schools; by regulation of 1917 it decreed that no permanent license should be granted any teacher who is not a British subject by birth or naturalization, all others being allowed only an ad interim certificate valid for not more than six months, renewable for no longer period and requiring a special oath; it further discontinued the authorization of school texts for bilingual teaching in the public schools.

2. The board has charge of the courses of study of the public schools of all grades, and has steadily made more rigorous the combined course of study first adopted in 1913, which constituted a great step toward unifying educational interests in the Province by satisfying the requirements of both the University Council and the Normal School.

CONSOLIDATION.

The most conspicuous feature of education in the western Provinces is the consolidation of rural schools at convenient centers, a measure practically unknown in the eastern Provinces of the Dominion, but of very rapid growth in the Provinces which are under the educational influence of the States of the American Union. The advantages incident to the consolidation of schools have from the first been thoroughly appreciated in Manitoba; more and better teachers, modern and hygienic buildings, possibilities of the beautifying of school grounds, largely increased enrollment, and in many places the attendance of practically all children of compulsory school age, instead of the deadening disadvantages of a number of inaccessible single-room schools. In 1917 eighty consolidations were in operation in Manitoba, covering a territory of one-tenth of the entire organized school area.

Progress in the improvement of the health and sanitary conditions of the rural schools continues through the—

> organized campaign in which the Provincial Board of Health and the Department of Education are cooperating. In 1917 the board of health decided to employ a staff of expert nurses to operate in the rural districts. In all cases there has been harmonious and effective cooperation between teachers and nurses. * * * In 1917 sixteen rural schools undertook to provide hot lunches of some sort, and the people look upon it favorably and the trustees give assistance in equipment and materials.

ATTENDANCE.

The problem of school attendance is always one that looms large in education in rural sections. Manitoba has had for some years a legal supervisor of school attendance; and by a succession of acts respecting school attendance, culminating in the one of May, 1917, it has sought to improve the attendance on the elementary schools, though with the reluctance of a democratic people to prescribe general laws it has refrained from passing any provincial compulsory school attendance law. The last act provides for the appointment by school boards or municipal councils of a school attendance officer or officers, and sets forth their duties as well as those of school trustees, parents, guardians, teachers, and inspectors under the act, prescribing suitable penalties. The act has social as well as educational import in its purpose of protecting children from neglect and of securing for them the benefit of an education. Attendance officers to the number of nearly 150 were appointed within the year following the passage of the act.

TEACHERS.

A large part of the credit for the vigor and the growth of the schools of the western Provinces is due to the unusual personnel of the teachers of the public schools. This is especially true of Manitoba. Here, as in the neighboring Provinces, the teachers are better paid than in the East, and they fill a larger place in the life of the people outside the schoolroom. As a consequence, there is every year a powerful draft upon the teaching force of the older Provinces. In the summer of 1918 an unprecedented demand was made upon the teachers of Manitoba by the Provinces still farther to the west, as shown by the publication of columns of advertisements, "Teachers wanted," appearing in the papers for perhaps the first time in the history of the Province. The greatest unrest ever seen in that body of course followed.

HIGH SCHOOLS.

As would be expected in a Province so progressive as Manitoba, the program of studies of the high schools has been under close scrutiny; and the Manitoba Educational Association has devoted much study to its reorganization and improvement. With the outbreak of the war the need was felt for a readjustment of studies. The time required in foreign languages necessary for admission to the university was considered disproportionate, and the high-school committee attempted an arrangement of courses to give a fair proportion of time to each important subject. The university was therefore asked to lower its language requirement from two foreign languages to one. After many conferences, the university council declined to grant the request. The issue is of course the one familiar in many countries under various names but with the same fundamental problem of dispensing with the study of Latin. Of interest, too, in its bearing upon the preparation for the high school, as well as upon the number of pupils sent into it, is the tendency to unite the two highest elementary grades into one for convenience of teaching where teacher shortage is felt. It has been tested in various localities but has not commended itself in actual practice unless, as has been suggested, Grade VIII could be stiffened and the secondary school begun with it.

THE UNIVERSITY.

An interesting experiment was initiated in 1918 by the University of Manitoba, preliminary to its establishment of a department of commercial education. Representatives were sent to the cities and towns of the Province to survey the possibilities offered for students in that branch, to analyze business conditions, local and general, and to examine methods of taxation and systems of licenses imposed by the various towns and municipalities. The report is awaited with great interest, as promising valuable information not only educationally but economically and legally.

The farthest reaching piece of legislation relative to higher education in the Dominion was enacted in 1917 by the assembly of Manitoba on the basis of the bill submitted by the minister of education, remodeling the constitution of the University of Manitoba, providing for a board of governors of nine members vested with full power over the financial affairs of the university and the final decision of all matters of academic policy; for a university council of 27 members, a few more than one-third of the number of the old council, vested with general charge of courses and academic work; and for representation of the denominational colleges of the Province upon the council alone. Upon the appointment by the Government of the chancellor and the installation of the administrative authorities, the reorganized institution began a vigorous career, with the enthusiastic support of all the educational elements of the Province.

SASKATCHEWAN.

The democratic ideas just described in the case of Manitoba are even more pronounced in the Province just to the west, Saskatchewan; but centralization more akin to that of the eastern Provinces has asserted itself in the public-school system of the latter. This centralization, however, has not lessened the deep popular interest in the schools. Perhaps the most convincing proof of this was the educational survey of the Province decreed by order in council and undertaken during the latter half of the year 1917. The public had been favorably prepared for this survey by the activities of the Public Education League, which had launched public meetings and led up to the proclamation of a public holiday by the premier, on which the needs of educational reform were emphasized at rallies held at a number of points. All this time there had been no lapse in public interest in education, as is shown by the fact that, since the organization of provincial government for Saskatchewan in 1905, school districts had been organized at the extraordinary rate of one a day.

With the tremendous increase in the amount of routine work thus devolving upon the department of education, serious discussion arose as to whether the school unit with a board of three trustees was not too small, and whether the organization of boards of seven members, as for the municipalities, would not be better able to handle a much larger territory organized as a municipality. The matter is as yet unsettled, but indications are that an organic change will be brought about by the stirring of public interest.

The progressive nature of the people and of the schools of Saskatchewan was well brought out in the findings of the survey to which reference has been made. The strongly centralized system, it was agreed, had been of great service in the early primitive days; but the findings bore out the belief that a system more adapted to a largely increased population and especially one giving consideration to local needs was now required. In the survey, as published in 1918, Dr. H. W. Foght, Director, thus summarized what he regarded as the determining factors in the system:

(1) The people of the Province have failed to use the schools as fully as they should have done.

(2) The pevailing system of school organization and administration in rural districts particularly is no longer adequate for modern uses.

(3) Abnormal opportunities in other occupations and other causes have conspired to make it difficult to train and keep in the profession an adequate number of well-prepared teachers.

(4) The courses of study in elementary and secondary schools do not in all respects meet the demands of a democratic people occupied with the conquest of a great agricultural country.

(5) The schools, in their internal organization, are planned less for the normal child than for the exceptional child, and offer slight opportunity for individual aptness and initiative.

(6) The system of examinations in use is a questionable test of the average pupil's scholarship, ability, maturity, and fitness for advancement.

(7) Bodily health and hygienic conditions in schools, so essential to effective study, have received little attention in the daily teaching, and are largely disregarded in the physical equipment of the schools.

(8) The schools, while liberally maintained, must receive even larger support in order that commensurate returns may be obtained on the school investment.

THE SCHOOL ATTENDANCE ACT.

The School Attendance Act, which came into effect May 1, 1917, at once increased the enrollment and regularity of attendance of school children falling within the compulsory age from 7 to 14 years. By its provisions town districts appoint attendance officers who report to the department of education every month. In village and rural districts such duties are fulfilled by the teachers. As regards territories covered by the school act and length of school year, every town and village district, and every rural district with at least 12 children of compulsory age resident within 1½ miles from the schoolhouse, shall offer at least 210 teaching days; and every district with at least 10 children of compulsory age shall offer at least 190 days. A most important phase of the act is that it provides for keeping systematic records of the population of compulsory age, which has hitherto not been legally required.

School consolidation is also involved with provisions for attendance, an amendment to the act just mentioned made in 1917 giving the minister of education power at discretion to allow a larger area than 50 square miles to be included in the district served by consolidated schools. Very significantly, Saskatchewan has fallen far below its sister Provinces of Manitoba and Alberta in the progress shown in consolidation, though considerations of climate and topography made consolidation as necessary and as feasible as in either of the other two Provinces.

Dr. Foght, in his summary, concludes that:

> Consolidation has made little progress in Saskatchewan because no provincial policy has yet been adopted extending Government grants and guidance to proposed consolidation districts. A belief that Saskatchewan is not yet ready for consolidation may have caused Government officials not to push the matter. No concerted policy has yet been adopted by the Government to encourage some particular form of consolidation. The 18 consolidations now in operation are due mainly to local initiative.

SHORT-TERM SCHOOLS.

Another unfavorable phase is the existence of the so-called "short-term school," by which are meant rural schools opening in April or May and continuing from five to eight months. Such an arrangement plainly represents a compromise which, whatever may have been its original justification, has brought seriously grave disadvantages in its train. These schools engage a new teacher each year and often change teachers two or even three times in the year. In many cases they can only obtain "permit" teachers because qualified teachers prefer schools that are in operation throughout the year. On this point the minister of education concludes:

> The consequence is that the children in these schools are backward in their studies, with thousands growing up who have never got beyond Grade IV, and unless action is taken at once these conditions will continue with the present generation poorly equipped for life's tasks.

INSTRUCTION IN AGRICULTURE.

As agriculture is the predominant industry of the Province, practically all interest in vocational and technical education for the past two years has centered in the furthering of agricultural education. The agricultural instruction committee in 1917 made the following recommendations to the Department of Education which, while they have not as yet become part of the official regulations, are practically certain to be adopted at an early date:

1. That agriculture and elementary science be compulsory for Third Class Part II of the teachers' course.
2. That household science be an optional subject with music or manual training for Third Class Part II of the teachers' course.
3. That agriculture and general science be compulsory subjects for examination instead of physics and chemistry for the second class teachers' diploma.
4. That an annual maximum grant of $500 be made to such high schools as give adequate instruction in the course in agriculture as defined from time

to time in the regulations of the department, the amount of such grant to be based upon the qualifications of the teachers, the nature of the equipment, and the efficiency of the teaching as reported upon by the inspector of high schools.

Aside from the formal instruction in agriculture, a large part is played by the Rural Education Associations organized in the various districts and municipalities with the cooperation of inspectors and the general public. Such interest has been aroused in this movement that more than 40 local associations were organized during the year 1917. They promote popular interest in education by means of school fairs, at which exhibits along all lines of country life are shown.

TEACHERS.

As in Manitoba, the personnel of the teachers of Saskatchewan is drawn largely from outside the Province, Ontario furnishing in 1916 more than 30 per cent and Manitoba 28 per cent of the total. The number of young teachers is unusual, one-third of the rural teachers being below 21 years and over half ranging from 20 to 25 years. In both of these facts grave disadvantages are evident. The present facilities to train teachers within the Province are entirely inadequate, and many hundred schools must be filled with provisional teachers, while very many others are below 21 years of age but hold permanent certificates. In the high schools, however, while the teachers are comparatively young, the average age being 32, the average of training and experience is unusually high. As Dr. Foght says:

> This combination of youthfulness and experience constitutes a very real asset for education in the Province, especially in view of the movement for better integration of the high schools and the grades, which will demand men and women who know intimately both elementary and secondary education.

In the field of health promotion Saskatchewan has made a forward step in the organization of a division of the Department of Education in charge of a director of school hygiene. A vigorous campaign for the conservation and promotion of health has been initiated and a survey made of hygienic conditions in the rural schools.

ALBERTA.

In Alberta educational progress for the past two years has been steady, in spite of distracting conditions due to the war. Naturally, a falling off was seen in the average attendance of pupils, though an increase was seen in the case of girls. The secondary schools suffered from enlistment of the larger boys for overseas service; and for purposes of increased production large numbers of boys, and in some cases girls, were permitted to assist in farming operations, the school-attendance act being less rigorously enforced.

The changed conditions brought about a different method of classification between graded and ungraded schools. Hitherto ungraded has meant rural, but many rural school districts now conduct graded schools, and as rural schools are more and more consolidated they pass from the list of ungraded to that of graded schools.

A further interesting effect of the change is seen in the fact that the enrollment of pupils in the secondary grades is increasing much more rapidly than the total enrollment in the lower schools of the Province, the increase being from less than 3 per cent in 1906 to nearly 6 per cent in 1916. Noteworthy also in its bearing upon the schools is the evidence of greater prosperity in the rural communities than in the town and village districts; this is shown by the fact that more than two-thirds of the money borrowed by school authorities according to the system of legal debentures was for the rural school districts. The distinctive feature of the financial support of the schools of Alberta is constituted by the legally organized school debenture branch, under a manager appointed by the Premier, a very important part of whose work is to supervise school-building plans, contracts, and initial orders for equipment, to prescribe modern requirements of lighting, heating, and ventilation, and to approve all financial engagements made by local boards. To it is largely due the credit of having made Alberta, the newest of the western Provinces, widely known for the uniform excellence of its school buildings.

THE SCHOOL ATTENDANCE ACT.

Most important of the administrative acts pertaining to the schools was the passage of the amended and much strengthened School Attendance Act in 1916, which took the place of the old "Truancy" act, whose name and some of whose provisions had become distasteful. Attendance officers under this act in the cities and larger towns are responsible for its enforcement. In the rural and village districts enforcement is by means of a school attendance branch and the school inspectors, who are ex officio provincial attendance officers. In cases of unjustifiable nonattendance the new law provides that officials, after exhausting tactful measures with recalcitrant parents or guardians, issue legal warning notices, serving them like other legal papers and allowing 10 days to elapse before the application of the law. Teachers also are required to carry out the provisions of the act especially by the inclusion of information bearing upon nonattendance in their monthly attendance reports.

A serious difficulty was found, however, in the laxity with which local authorities excused attendance on various exceptions outlined in the act, especially that stating that "the parent, guardian, or other person shall not be liable to any penalty imposed by this act in respect to the child if the child has attained the full age of 14 years and is regularly employed during school hours in some useful occupation." Under this head, owing to the scarcity of farm labor, a great many boys missed the schooling which they should have had. Many inspectors, however, considering the harvesting and marketing of crops important as war measures, did not bring legal pressure to bear, being convinced that such nonattendance was a matter of necessity and not of neglect.

CONSOLIDATION OF SCHOOLS.

Consolidation of rural schools has proceeded steadily in Alberta, contributing also, by the wisdom of a number of inspectors, to the furthering of vocational and rural secondary education. This was initiated by a very progressive prevocational survey made by the Department of Education with a view of reaching primarily the country youth in their teens. To this end recommendations were made for distinctively rural schools in which a high-school course of two or three years, and closely adapted to local needs and conditions, should have the most prominent place.

THE BILINGUAL SITUATION.

The bilingual situation in Alberta has been discussed in connection with that topic, as it applies to the Dominion of Canada. As regards the setting of this problem in the school system and administration of the Province, attention should again be called to the fact that Alberta alone has a special supervisor of schools for foreigners. This officer has been of the utmost advantage and usefulness in instructing trustees, both lay and official, in their duties of putting and keeping the schools of foreigners in operation; in supervising the affairs of the districts; in harmonizing internal dissensions; in securing qualified teachers; in building teachers' houses in many places, and in general lending aid to the boards in remote localities, and in the management of financial affairs. A large part is also played by this official in spreading among the alien population elementary ideas of sanitation and correct methods of living, which connects vitally with the projected system of medical inspection throughout the Province, which is likely to be made compulsory within a short time.

TEACHERS' CODE OF HONOR.

An interesting proof of the progressiveness of the teaching force of Alberta is furnished by the action (1918) of the Alberta Teachers'

Alliance in promulgating the following code of honor for the guidance of the body:

It shall be considered an unprofessional act—

1. To disregard the validity of a formal contract with the school board.
2. To criticize adversely, except in an official capacity, the efficiency of a fellow member of the alliance.
3. To pass along rumors derogatory to a fellow member of the alliance, whether such rumors be based on fact or not.
4. To seek professional advancement by any other than professional means.
5. To seek employment with the school board (*a*) not in good standing with the alliance, (*b*) already having a member of the alliance under contract for the same position.
6. To make known to nonmembers, except through authorized channels, the proceedings of a committee or general meeting of the alliance.

BRITISH COLUMBIA.

Educational interest in British Columbia has centered during the past two years in the extension of the work of the high schools in such a way that the varied needs of different communities may be served; in so developing the work of the rural high schools as to adjust them to the life of agricultural communities, and especially to attract the farm boy into the high schools and there train him definitely in agricultural science; in providing nonprofessional training for teachers in elementary as well as high schools; in spreading the appreciation of the need of physical exercises and organized playground sports; in effecting important changes in the high-school examinations whereby in cities of the first and second class examinations were waived and pupils were promoted to high schools on the recommendation of their principal, and second-year high-school pupils were promoted on that of their teachers.

On the strictly administrative side, amendments were made to the public schools act of 1916 for the transition of assisted schools to the status of regularly organized school districts, for defining city school districts of various classes, for apportioning per capita grants of various amounts for cities of the various classes and for rural school districts, and for paying bonuses upon the salaries of teachers in the rural districts. Perhaps most noteworthy is the provision by which—

where it appears that in any school district there are 20 or more persons of the age of 14 years and upwards desirous of obtaining instruction in technical education, manual training, domestic science, commercial training, or in the ordinary branches of an English education, the board of school trustees may establish, under regulations issued by the council of public instruction, night schools for their benefit.

PUBLIC SCHOOL SYSTEM OF JAMAICA.

By Charles E. Asbury,

American Consul, Port Antonio, Jamaica.

ORGANIZATION.

Jamaica is an island in the West Indies, and a British colony, with a population by the last census of 831,000, of whom over 95 per cent are of African descent, either in whole or in part. Fifty-three per cent of the population can read and write. In 1916–17 the average attendance at school was 62,000, or 1 of 12 population. With a total expenditure by the Government of $6,000,000, only $420,000, or 7 per cent, was spent for public education. This amounts to $6.75 per head of average attendance and 55 cents per capita of population.

The facilities for public instruction in Jamaica consist of public elementary schools in the towns and villages throughout the island, with a few private secondary schools in the chief centers. There are training schools for teachers which give advanced elementary instruction, but there is no college in the colony.

The schools are administered under a board of education for the colony, at the head of which is the director of education. The director has on his staff 11 inspectors, who are usually men from English universities. The Department of Education allots the funds appropriated for educational purposes, and exercises advisory supervision over all the schools of the island. The governor in privy council retains final authority in all matters of educational legislation.

A large majority of the public elementary schools are owned and managed by the various Protestant churches, and receive financial aid from the Government. At the last report there were 696 public elementary schools, of which the churches owned 566, the Government 111, and other organizations 19. The Department of Education maintains its control over the schools through its power of granting or withholding financial support.

Each parish has its school board, and the schools in certain portions of the island have been grouped under district boards. These boards, however, have only such powers and duties as the department may delegate to them, the immediate control of each school resting in the hands of a manager, who represents the owners. The manager is advised by a local board, but he has authority to make final decisions, employ teachers, provide equipment, and inspect the schools, and in most ways, he actually directs the policy of the school.

GRANTS, SUBSIDIES, ETC.

The appropriations for education are distributed among the schools by the department through an elaborate system of "grants," paid to the school managers in monthly installments. An average attendance of 30 or more is necessary to secure a grant. The amount of the grant is determined by the average attendance and the "marks" or rating given the school at a formal annual inspection. A perfect rating consists of 84 marks. If the average attendance is 60 or more, a grant is made of $4.86 for each mark. If less than 60, $3.65 is granted for each mark, and 2 cents in addition for each unit of average attendance. If the average is over 50 but under 70, an additional $1.45 is paid for each unit of attendance above 50. If the average is over 70, $2.90 is paid for each surplus unit of attendance, in addition to the $1.45 for the units from 50 to 70. All these grants are to be applied to the salaries of the teachers. Additional small grants are made for teaching industrial subjects.

The department makes limited grants to assist in erecting or repairing school buildings and teachers' cottages. In no case can this grant exceed $486 for a school, or $243 for a cottage, or one-half the total cost of the project. The average annual grant for buildings is approximately $2,500. The building must be located on at least one-fourth acre, and must be occupied as a public school or teachers' dwelling for at least 12 years after the grant is made. All school sites and building plans must have the department's approval. Where a Government school is located in a building owned entirely by private persons, a nominal yearly rental of 36 cents is granted for each unit of average attendance. There are also small grants for supplies, library books, sewing materials, sanitation, garden fences, etc. These amount to only a few cents per unit of average attendance.

TEACHERS.

All teachers in the public schools are registered by the department, and are classified on the basis of training and rank in examination. They must be 18 years of age or over, and must have had at least one year in a teachers' training school or have passed the third year pupil-teacher's examination. Teachers are classified as "principal teachers" if they are judged qualified to take charge of a school; as "assistant teachers" if not so qualified. The advancement of teachers depends upon their success in school and in examination, and the length of their experience. Certificates are issued upon a successful examination in the second or third year's course at a training school. A principal teacher who has taught for 12 years, with inspection grade of "first class" for at least six years, is given a "good service" certificate which has an important bearing upon the teacher's salary. A few teachers are registered as qualified for kindergarten work. They are required to have special training, and aspiring teachers are afforded an opportunity to secure this training, partly at Government expense.

Each school may employ, in addition to the regular teachers described above, one or more pupil teachers. They must be between the ages of 14 and 17, and are required to pass an examination. They must execute a three years' contract, and are paid a small wage. Pupil teachers are entitled to receive three hours' extra instruction per week from the principal teacher, outside of school hours. Upon passing an examination after three years' service as a pupil teacher, the candidate is entitled to registration as an assistant teacher, and is eligible for employment. A few pupils who have completed the elementary course and are unable to continue their education in a private secondary school are allowed to attend the elementary schools and act as monitors, with the privilege of attending the pupil-teachers' classes.

The training schools for teachers continue the essentially English idea of education—a matter of private initiative and Government subsidy. Any school with proper equipment which follows an approved course of study may seek recognition as a training school for teachers. Some of the requirements are the pupil-teachers's examination for entrance, his being of the minimum age of 17 years, and pursuing a three years' course, and the maintenance of an elementary practice school, which in turn may be a "Government grant" school. To each recognized training school the Government makes a grant of $120 per year for the board and instruction of each regularly admitted student, with a bonus of $50 for each one that passes the annual examination, provided that the total grant does not exceed four-fifths of the total cost of maintaining the school. Religious interest or philanthropy is expected to supply the remainder.

Before students are admitted to the training schools, they must make an agreement, supported by a bond, to teach for six years in the Jamaica schools. For each year of failure to fulfill this promise, the student becomes liable to the Government for the sixth part of the cost of his training.

The training school scheme has not been found a great success. The Government has been compelled to establish two training schools of its own, in addition to the subsidized ones, in order to keep up the supply of teachers. There are at present about 500 certified teachers in the colony, with 114 students in the training schools run by the Government, and 26 in the schools under subsidy.

In the training schools, as in all other Jamaican schools, the course of study is determined by the subjects on the final examination.

These examinations are given at the close of each year's work, and include the following subjects: Reading and recitation, writing, English, arithmetic, algebra, school management, scripture and morals, geography, history, science—general and agricultural, physiology and hygiene, geometry, vocal music, drawing, and manual training for men, or domestic science for women. A grade of 50 per cent is required for passing in the first six subjects, and 33 per cent in the others. In addition to the regular training course, a brief agricultural, technical, or kindergarten course may be given and the attendance of teachers permitted or required, with a portion of their expenses borne by the Government.

The salaries of teachers are at present determined by the system of grants and marks mentioned above, based upon the rating of their school at the annual inspection. A radical change in the system was made recently, to go into effect April 1, 1919. Hereafter the determining factor is to be the average attendance of the school, with the teacher's rank and success record taken into consideration. The present minimum of $90 per year for assistant teachers will be retained, but salaries will average about $200 per annum, with a maximum of $875 for the head masters of the larger schools. All extra grants and bonuses will be discontinued. This change has been suspended, however, owing to lack of funds to put it into operation.

Teachers are employed by the manager of the school under written contract, subject to the approval of the department. The contract may be terminated at any time by either party after three months' notice, and every vacancy must be advertised.

SUPERVISION AND ADMINISTRATION.

All superintending is in the hands of the 11 inspectors attached to the Department of Education. They receive salaries of from $730 to $1,215 per annum, with traveling expenses. Provision has recently been made for raising the pay of inspectors to $972 and $1,458, and creating two new positions of "chief inspector," with salaries of from $1,458 to $1,700. The intention is to appoint only graduates of English universities to these positions.

Every school in Jamaica which receives Government grants and offers an elementary course of instruction is a public elementary school. All pupils may attend who care to do so, provided they are eligible under the law and accommodations are adequate. No tuition may be charged. New schools are established upon application to the board of education, which in turn submits the proposition to every minister of religion within a radius of 4 miles from the proposed location. If the department decides that the school is necessary, and that all requirements have been met, it may grant a lump sum for the first year and permit the school to be opened.

Schools must be in session four days per week, mornings and afternoons, and in certain towns one-half day in addition. Each day's session lasts five hours. A minimum of 28 half-day sessions per month and 288 per annum is required. Holiday periods must be approved by the department, and usually differ widely in the several schools.

The board of education has authority to make attendance at school compulsory, but so far the law has been made effective only in three towns of the island. The president of the Jamaica Teachers' Union states that there are from eighty to ninety thousand children in the island who do not attend school. The question of extending the compulsory attendance law over the entire island is being constantly agitated, but it is improbable that any change will be made under the present economic conditions. Objection is also made to the provision of law which compels a pupil to withdraw from school at 14. Unless he has completed the elementary course by that time, he is deprived of any further opportunity to do so.

The teacher is required to keep an elaborate set of records, including admission book, register of attendance, log book, stock book of materials, account book, pupil-teachers' record book, and garden book. The log book is very interesting. It is a sort of diary of the school, in which is recorded day by day every event of importance. It also contains the record and recommendations of the annual inspections. Before a teacher may administer corporal punishment, he must be authorized to do so by the manager, and the authority must be written out in the log book.

CURRICULUM AND COURSES.

The curriculum of the public elementary school is based entirely upon the subjects for examination at the annual inspection, and the entire time and attendance of teacher and scholars are devoted to preparation for that event. The inspection lasts only one day, and in that time the inspector examines all the pupils on the whole curriculum and determines the rank of the school and the standing of the teacher. The highest rank attainable is "84 marks," distributed as follows: Organization, 6; discipline, 6; reading and recitation, 15; writing and English composition, 15; arithmetic, mental and written, 15; elementary science, especially agricultural, 8; Scripture and morals, 5; drawing and manual occupations, 6; geography with incidental history, 4; singing and drill, 4; total, 84. A school which attains 56 marks or more, with a grade of not less than two-thirds of the possible marks in the fundamental subjects and one-third in the others, is ranked as of the first class. Others rank second or third class according to their marks.

The elementary course is graded into seven standards, each supposed to represent one year's work of a normal child. The lowest standard is called the "junior," and the others are numbered consecutively from I to VI. The work of the sixth standard is not essential for entrance to a secondary school, and is given only in the larger schools corresponding to our "graded" schools. In the smaller schools the standards are grouped into three divisions, lower, middle, and upper, with arrangements for covering all the course by a system of two courses of study to be given in alternate years.

It would appear from the list of studies that the curriculum is much the same as that of the average American school. The instruction, however, is radically different. There is much more emphasis in the Jamaica school upon the purely mechanical exercises, such as reciting memorized poems, writing from dictation, drawing and penmanship. There is an almost total absence of quiet seat work and study. The first impression of a Jamaica school room is likely to be one of hopeless confusion. Each of the three divisions may be reciting at the same time, to the teacher, the assistant, and a pupil-teacher. It is remarkable what good results are obtained, however, in some schools.

Some difficulty has been experienced in the matter of religious instruction. Since the various churches own so many of the schools, they have insisted upon Bible teaching and the catechism in the curriculum. In order to meet the situation, the study of Scripture and morals is included, but teachers are enjoined from commenting except in the way of pointing out an obvious and universally recognized lesson. In addition, a conscience clause has been enacted by which pupils who so desire are excused from school during the Scripture hour, which must be at the beginning or close of a session.

INDUSTRIAL AND TECHNICAL TRAINING.

Some real progress has been made in industrial instruction, but the work is greatly handicapped for lack of funds and of competent instructors. A Government technical school was established in Kingston in 1896. Here pupils from the Kingston elementary schools receive instruction in manual training and household industries. The school also conducts continuation evening classes for both sexes. The work is purely elementary, and its limited scope is indicated by the fact that the head master is also the manual training instructor of the principal teachers' college and organization inspector of manual training for the whole island, having direct supervision over all the manual training work. There are six additional teachers for day classes and six for the continuation school. Provision is made for regular work in manual training, gardening, and "housewifery" in other schools where suitable teachers and equipment can be obtained. The manual training course is for the boys of the upper division and consists entirely of mechanical drawing and simple woodwork. Small grants are made by the Government for teachers and tools.

There are about 400 school gardens in the island, but the instruction in agriculture is very rudimentary. The department requires a plat of not less than one-tenth acre, and assists in the construction of a fence and the purchase of tools. A small grant is also made to the teacher for garden instruction. All the pupils work in the garden, the boys by requirement and the girls by permission. The aim seems to be to use the plat chiefly for experimental purposes and for demonstration, rather than for practical crop results.

All schools are required to teach plain sewing to the girls, and a few which have met the requirements as to equipment receive Government aid for the teaching of cooking and laundering. There are a very few schools where practical domestic science is taught, but they are chiefly private secondary institutions. There is even in Jamaica a touch of the feeling that work is degrading and unbecoming a scholar, and industrial work has been hampered accordingly.

Nothing has been done in Jamaica in the way of supervised playgrounds. There is a little drill work occasionally, but the children play their own games in a half-hearted way. The effect is plainly seen in the poor physique of the children, and the absence of the wholesome democratic spirit which free, healthy play so much encourages.

SECONDARY INSTRUCTION.

Secondary instruction has been left largely to private initiative and facilities are consequently limited. The Department of Education exercises some jurisdiction over the private secondary schools, however, and is gradually extending its control. Scholarships are provided from public funds to the total amount of $1,360 annually for deserving pupils who desire to continue their education above the elementary course. These scholarships pay the holders from $50 to $120 annually for two years. They are distributed by competitive examination to applicants who must be under 12 years of age. Holders are expected to pass the Cambridge secondary examinations in order to retain their places. These examinations were introduced in the colony in 1882 by the Jamaica Institute, a semipublic institution. In 1916 there were 471 candidates for the several grades of the examinations, of whom 60 per cent were successful. The scope of these examinations largely determines the curriculum of the secondary schools. They cover Latin, French, algebra and geometry, English history, geography, English composition, grammar and literature, and Scripture. The scope of each examination is announced in advance, and the year's work is arranged especially to meet the examination requirements.

The only secondary technical instruction offered by the Government is in the form of trade scholarships to winners of a competitive examination who agree to apprentice themselves to a master workman in their chosen trade for a period of years. During the first two years of the apprenticeship, the students are given instruction in the Kingston Technical School at the expense of the Government. A grant is made to cover the cost of their board and clothes during the apprenticeship, and to provide them with kits of tools when they complete it. The maximum number of students provided for at any one time is 25.

Legislative provision has been made for grants to continuation schools for working boys and girls between the ages of 14 and 17, but so far Kingston is the only community to take advantage of it, The law provides for a course of 26 weeks of 3½ hours pèr week, with instruction in English, arithmetic, Scripture, and home economics, manual training, or agriculture. A movement is on foot to obtain more substantial Government aid for these schools so that the crying need for elementary instruction for the boys and girls above 14 may be met.

There is a healthful dissatisfaction with the present system among the progressive element, which promises to become strong enough ultimately to secure good schools, adequately equipped, with strong emphasis on industrial and vocational education.

RECENT PROGRESS OF EDUCATION IN AUSTRALIA AND NEW ZEALAND.

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GENERAL FEATURES.

The Commonwealth of Australia comprises the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania. Each State has developed its own system of education, controlled and supported by the State authorities. Primary education is free in all the States and secondary education is free in some. Compulsory school attendance in most of the States is from 6 to 14; in New South Wales the compulsory period begins at 7.

Every effort is made by the State authorities to reach the children in the sparsely settled centers. For this purpose the State establishes central schools in such localities where the children can be conveniently conveyed to school free of charge, or provisional schools, i. e., small schools in which the attendance does not exceed 8 or 10. When the number of school children does not warrant the establishment of a provisional school, half-time schools are formed, the teacher visiting these schools on alternate days. In some places the teacher goes from house to house. In 1908 New South Wales inaugurated a "traveling" school, the teacher being provided with a tent for himself and one to be used as a school. Two additional schools of the same kind have since been established. Other States have made similar arrangements. Often the State grants subsidies to a teacher engaged by two or more families; the teacher must, however, be officially recognized by the Department of Education. In localities where no facilities can be found for either schoolroom accommodation or board and lodging for a teacher, the children are reached by correspondence. This scheme seems to bring best results in homes where the parents or elder sisters or brothers can assist the young beginner. It has been successfully introduced in New South Wales, Victoria, and Tasmania. In Victoria the system was developed from the Teachers' College, and 120 isolated children were thus taught in June, 1917.

Education in the Commonwealth is on the whole homogeneous. As each State developed independently, minor differences arose in the course of years. To make the work of the various departments more uniform and for the purpose of coordinating the school systems in the different States, the first conference of Australian directors of education was held in Adelaide in July, 1916.

According to the ministerial report the following resolutions were passed:

1. AGRICULTURAL EDUCATION.

(*a*) That nature-study work be developed with a view to increasing its usefulness and making it of practical benefit to the children.

(*b*) That agricultural education be developed and carefully organized.

(*c*) That suitable schools be established in rural centers, so as to give, in addition to higher primary work, a direct practical training in subjects specially useful to rural workers; e. g., for boys—woodwork, metal work, blacksmithing, simple building construction, land measurement, and agriculture; for girls—cookery, laundry, dairying, and smaller farming industries.

(*d*) That for the largest centers of population agricultural schools be established for city boys who have completed the primary course and who desire to follow agricultural pursuits; such schools to act as feeders to the agricultural colleges.

(*e*) That it is desirable that some method be adopted to coordinate the work of the various State authorities, dealing with various phases of agricultural education.

2. CONTINUATION PERIOD OF EDUCATION.

1. That as far as practicable provision should be made for the continuous education of boys and girls beyond the primary standard of instruction, and that this education should include both a specific training for citizenship and courses of instruction preparatory for various classes of future occupations.

2. That legislation is desirable to provide for such continued education, both full time and part time, in daylight hours; and, further, to provide that it be obligatory upon all boys up to the age of 16 to receive such continued education, either whole time or part time, where facilities for the purpose are provided.

3. That while facilities for similar continued education should be made available for girls, their attendance for the present should rest on a voluntary basis.

3. INDUSTRIAL EDUCATION.

1. That instruction in craftsmanship be in two grades:

(*a*) Preparatory.—To be given in full-time day schools in continuation of the primary-school course, and that the courses of such schools include such instruction combined with hand training as will provide a preparation for more specialized trade training.

(*b*) Technical schools for instruction of persons (i) Actually engaged in a skilled trade, in order to supplement by school instruction the training gained in the practice of the trade; (ii) But it is desirable that instruction in such schools be arranged in daylight hours.

2. That the State and Commonwealth Governments be invited to give a lead to other employers by requiring the attendance of their young employees, during working hours, at suitable technical classes.

4. COMMERCIAL EDUCATION.

1. That in view of conditions likely to prevail after the war, attention be given to the provision of commercial education.

2. That provision be made in the courses of study of secondary schools of both lower and higher type for a commercial group of subjects in those States in which this provision has not already been made.

3. That for those who have left school and have entered upon commercial callings, suitable evening courses in the State educational establishments be instituted, and arrangements be made by which these courses shall lead up to the university school of commerce.

4. That arrangements be made whereby one or two universities should provide the instruction on some reciprocal plan to be determined upon by consultation among all universities of the Commonwealth.

Of interest are the resolutions with regard to arrangements for education in adjoining States of children living in border States. These read:

(*a*) That children living on the borders of a State be given every facility for attending school in the neighboring State if there is no school near them in their own State.

(*b*) That the department, when dealing with questions of establishment of new schools on the borders of States, take into consideration the total number of children in the district on each side of the border.

(*c*) That there is no need for any financial adjustment in respect to this arrangement, as the benefits to the States are fairly equally divided.

(*d*) That a review of the border schools be made as soon as practicable, with a view to improving existing conditions.

The conference also passed a resolution that the school certificate of one State be recognized by another State, and finally that "there be cooperation between the States in the matter of training of specialist teachers."

WORKERS' TUTORIAL CLASSES.

An interesting development in the education of the working circles is the inauguration of the Workers' Tutorial Classes, an organization somewhat akin to the extension lectures. The scheme was launched in 1913 in connection with the formation of the Workers' Educational Association.

The Workers' Tutorial Classes exist at present in all the States. Although controlled by the university, they receive Government grants (except in Western Australia) ranging from $1,500 in Victoria to $25,000 in New South Wales. The aim of these classes is to bring the university into closer relation with the working men. The principal subjects offered are industrial history, economics, political science, and sociology. The entire course extends over three years. The students' reading is supplemented by class discussions, and by writing an essay on subjects dealing with some phase of economics, civics, and sociology.

Tutorial classes have been formed at the universities as well as in suburban and country centers.

GERMAN SCHOOLS IN AUSTRALIA.

A number of private schools were conducted by German teachers in several States of the Commonwealth prior to the war. In South Australia 52 schools were under the control of the Lutheran Church, and the language of instruction was exclusively German. The education act of 1915 provided that teaching in these schools should be through the medium of English for at least four hours a day. The education amendment act of 1916 modified this law to the effect that the Government should take over all the Lutheran schools and that no language but English should be spoken in the schools. The use of German as the language of instruction is prohibited in all the States of the Commonwealth.

TRAINING OF RETURNED SOLDIERS.

The Department of Repatriation has been created in the Commonwealth for the purpose of replacing the returned soldiers in civil life. An officer of the department meets the transports at the port of disembarkation and places before the men the facilities provided by the State. It has been proposed to provide workshops in leather work, basket-making, raffia work, and toy making for the convalescent men who are still in hospital. The proposed workshops are to be under the control of the military authorities.

The Department of Education in each State offers free tuition to returned men in all the technical colleges; responsibility of finding employment for those who had finished their training rests with the Government.

THE TRAINING OF TEACHERS.

The training of teachers received considerable attention on the part of educational authorities. With the institution by the States of a wider high-school system and greater facilities for the study of the subjects relating to education at the universities a marked improvement was effected in the training of teachers. In recent years definite progress in that direction was made in the States of Victoria and Tasmania.

In Tasmania the new scheme of teachers' training, put into operation in January, 1918, lengthens the minimum period of training from 15 weeks to 6 months and adds new requirements for the junior public examination. The new scheme provides four distinct courses according to the nature of the work which the applicant is to undertake.

(*a*) A short course which aims to prepare teachers for provisional schools and the less important positions in the primary schools. It extends over six months.

(*b*) Infant course designed for prospective teachers in infant and kindergarten schools. The course extends over one year.

(*c*) Primary course designed to train teachers for the primary schools. The students must have completed two years of professional training in a State high school and have qualified for matriculation before entering the training college. The course extends over one year.

(*d*) Secondary course designed to train teachers for the secondary schools. It is open to promising students who have satisfactorily completed the primary course. The length of study is one to two years, in addition to the year spent in the primary course.

Before appointment the prospective teachers enter into agreement with the school authorities to serve the department for a certain length of time, which varies from two to five years, according to the expense and length of the course they have pursued.

A similar scheme for the training of teachers was put into operation somewhat earlier in Victoria. Instead of one course, leading to the trained teachers' certificate, four courses have been provided, namely, a secondary, a primary, an infant, and a short course for teachers of small rural schools. Under a correspondence system rural teachers may receive further instruction by corresponding with the Melbourne High School. Similar arrangements are also made at the Teachers' College for country teachers who are studying for an infant teacher's certificate.

The training of teachers has been further greatly promoted by the courses on education recently introduced in some of the Australian universities; for instance, a lectureship on education has been inaugurated at the university of Tasmania. At the university of Western Australia education may be offered as a subject for a degree in arts; arrangements have also been made for a postgraduate diploma of education.

TECHNICAL EDUCATION.

The spread of technical education continues in all the States of the Commonwealth. In recent years noteworthy measures for the purpose of reorganizing the technical schools have been taken in New South Wales, South Australia, and Tasmania.

In *New South Wales* a scheme was evolved whereby the system of the workshop was coordinated with that of the technical school and college. Two main courses of instruction have been established: (*a*) Trade courses for apprentices and (*b*) higher courses for students desiring to pursue their studies in the various trades and professions. An important feature in the new scheme is the regulation regarding admission. No student is admitted to any course unless evidence is furnished that he possesses sufficient preparatory knowledge to benefit by the training. An exception is made in the higher diploma course in science, which is open to students irrespective of occupation. The trades courses are divided into two parts; the lower courses, covering a period of three years in the trades schools, and the higher, extending over two years in the technical colleges. A trade school leaving certificate admits the student without further examination to a technical college and thence to the university. The primary technical school is thus linked with the highest institution of learning.

In 1916 there were three technical colleges in the main industrial centers, and 10 trades schools in suburban and country districts; classes in elementary technical instruction were held in various smaller localities.

The measures regarding apprenticeship inaugurated in New South Wales in 1914 were introduced a few years later in *South Australia*. The technical education of apprentices act, passed by the legislature in 1917, provides for the appointment of an apprentices advisory board, with the view of changing the whole system of apprenticeship. The chief provision of the act requires that each indentured apprentice, during the first three years of his apprenticeship, may be compelled to attend suitable technical classes for six hours per week for 40 weeks per year. Four of these hours shall be during the working hours and two in the evening.

In *Tasmania* a commission was appointed in 1916 for the purpose of developing technical education, and bringing the existing technical schools into proper relation with the primary and secondary schools.

As a result of the commission's recommendations a technical branch in charge of the organizing inspector was created in the Department of Education. Technical schools were reorganized and classified according to their courses as junior or senior technical schools.

The junior technical schools aim to give prevocational training in industrial, commercial, and domestic subjects. The course extends over either two or three years and is free. The senior technical schools provide vocational training in industrial, commercial, art, and home-making subjects. The length of the courses varies from two to five years. Plans have been made for the opening of four junior technical schools in the immediate future.

Progress in technical education has also been made in Victoria, where seven junior technical schools were opened recently. In Queensland the first trade preparatory classes were inaugurated in 1917 and progress was so gratifying that the scheme will undoubtedly lead to the establishment of a comprehensive system of apprenticeship.

An interesting feature of the technical education is the setting up of advisory committees consisting of representatives nominated by employers' and employees' associations. These committees are formed for each subject or group of subjects offered in the technical schools. The duty of the advisory committees is to visit classes and inspect the work of the students. They may also advise on the scope and detail of the syllabus.

The following special features developed in recent years in the various States are of interest:

NEW SOUTH WALES.

Public instruction (amendment) act, 1916.—This act contains important provisions regarding compulsory school attendance, the certification of private schools, and the inspection of school premises. Compulsory school attendance is provided for children between the ages of 7 and 14, the lower age limit being raised from 6 to 7. Exemption is granted to children receiving instruction at home on at least 85 days in each half year. To comply with the new regulations children must be sent to schools certified by the department as efficient. Hitherto the department exercised no supervision over private schools except those that applied for registration under the bursary endowment act. This act, passed by the Parliament in 1912, provides bursaries for students in public or private secondary schools and in the University of Sydney. Private schools desiring the benefit under the act must register and comply with the department regulations with regard to premises, the organization and equipment of the school, the method and range of instruction, and efficiency of the teaching staff. Fees in the primary schools were abolished in 1906, in high schools in 1911. Since 1916 textbooks and materials have been provided free. In recent years great progress has been made in secondary education. The number of high schools has increased from 5 in 1910 to 22 (including 3 intermediate) in 1916; the average quarterly enrollment has risen from 894 to 5,330, and the cost per scholar from about $35 to $105.

Higher education is fostered by a system of public exhibitions which include the cost of matriculation, tuition, and degree fees. To cover the increased cost of the exhibitions the statutory endowment fund was increased by £10,000 per annum under the provisions of the amending act of 1916. By the same act £2,000 were assigned for the establishment of a chair of architecture at the University of Sydney.

The Government aid received by the University of Sydney during the year 1916 amounted to £54,592. The teaching staff consisted of 23 professors, 7 assistant professors, and 122 lecturers and demonstrators. There were also on the university staff 8 honorary lecturers and demonstrators. The number of students attending lectures during 1916 was 1,660, including 500 women.

VICTORIA.

Education of women.—The Council of Public Education, appointed to advise on educational matters, submitted in its report for 1917–18 the following data on education of women. The council pointed out that in view of the fact that compulsory education ends at 14, and girls are not permitted to work in a factory until the age of 15, much valuable time is wasted. The council proposes, therefore, to extend compulsory education of girls until the age of 15. It suggests that during the impressionable years of the girl's life she should be taught in special schools by women teachers. The curriculum in these schools should embrace cultural as well as practical subjects. The subjects proposed by the committee include English, mathematics, geography, history and civics, hygiene, and music, also instruction in simple cookery, needlework, and laundry work. Practical work should not occupy more than one-third of the time during the first year, but should be extended to one-half of the time during the final year.

As regards secondary education the council found that "at present the course of work followed is very largely determined by prescribed entrance examinations to the university." This should be changed. Instead of a prescribed course of study, alternative courses should be instituted for girls who do not contemplate a university course. Courses in art and music should be introduced in the school curriculum and given the same credit as those in literature and mathematics.

> The general practice in the secondary school—with boys as well as girls—is to look upon art as something like an excrescence; it is dubbed an "extra," and is not considered worthy of a recognized place in the curriculum. This should be corrected.
>
> The girl who leaves the primary school, and, more particularly, the older girl who leaves the secondary school, should do so with, at least, the beginnings of a cultivated taste. Mere literacy studies, however important, will not do this. The critical artistic faculty need cultivation as well, and as much as any other. Study should not stop short at the ability to express form and color, but should, by the application of form and color to decoration and design, and its expression in dress, architecture, and furniture, cultivate an appreciation of tasteful and appropriate surroundings—matters that are far too important to be left to the tender mercies of the dressmaker or the furniture warehouseman. Liking and disliking should have a basis in knowledge and culture, and not in ignorant whim and caprice.

Industrial training for women should be greatly extended. Junior technical schools for girls desiring to enter the industrial field should be preparatory to the courses in technical schools which in Victoria are open to women. Greater facilities should also be afforded to girls who wish to enter upon a commercial career.

Finally, the council lays stress on the moral and physical education which should be cultivated in girls' schools on a larger scale.

QUEENSLAND.

Vocational education came under the control of the Government in 1908 and has since been steadily growing. Among the most recent developments are the opening of a trade school for apprentices and the extension of instruction in domestic science and agriculture. In 1917 a scheme was launched to provide classes in domestic science in the sparsely populated centers. This is done by means of itinerant teachers. The traveling instructors are provided with portable structures which are used when erected as domestic science classes. The course is outlined for the period of six months.

A report on agricultural education in Queensland was issued in 1917 by a special investigating committee appointed by the under-secretary of public instruction. The committee advocated the introduction of agricultural education along the following lines:

Agriculture should be a matter for the State rather than the individual. In primary schools gardening and tree planting on a small scale should be encouraged, also nature study and observation. More rural schools with an elementary program on agriculture should be opened by the Government. In secondary schools provision should be made for the study of agricultural subjects. These schools should lead directly to agricultural colleges, which in turn should be affiliated with the university. A department of agriculture under the faculty of science was also recommended.

The first rural school was opened in Queensland in January, 1917. The curriculum is practical. It is designed to equip the boys and girls with knowledge suited to the requirements of those who live on the land.

Agricultural instruction has also been introduced by the department in the primary schools, where milk and cream testing is a part of the curriculum.

WESTERN AUSTRALIA.

In Western Australia every effort is made to reach the children in the sparsely populated areas. Until recently a full time Government school was established in any locality where a regular attendance of not less than 10 children between the ages of 6 and 14 was assured. If the attendance fell below, the school was closed. The parents were then urged to engage a private instructor, the Department of Education sharing the expenses. The new regulation, issued in 1916, increases the school facilities by providing that the average attendance for a period of six months must fall below eight before the school can be closed. The report of the Education Department for 1917 shows that 646 primary schools were in operation during that year. Of these, 35 new schools were opened in 1917, 11, which had previously been closed, were reopened, and 7 were closed during the year. Of the 646 schools, 341 had an average attendance below 20.

The practice of the department can be readily understood when it is borne in mind that the population of the State consists of 320,000 inhabitants scattered over an area of about 1,000,000 square miles. The problem of the small country schools in Western Australia is very pressing.

Endeavors are being made by the school authorities to bring the country child in closer touch with his surrounding. Courses in elementary science have been recently introduced in these schools, and experiments in the growing of vegetables, culture of flowers, and the elementary agriculture carried on in the school gardens. The teachers receive much assistance by way of departmental publications and outlines in lessons dealing with the elements of agricultural science. In this work the Department of Education is greatly assisted by the agricultural department of the university and by the commissioner of agriculture. The training college is also devoting special attention to the work of prospective teachers in small country districts.

From time to time short courses for teachers extending over a fortnight are held in centers where the neighboring teachers can easily attend these lectures. The courses are conducted by school inspectors.

District high schools have been recently established in several localities. In addition to the general subjects, the curriculum provides for a science course with direct bearing upon agriculture. The high schools are not free, but a system of scholarships enables promising country children to avail themselves of a secondary education.

SOUTH AUSTRALIA.

School committees.—A new departure in the school system in this State is the inauguration of school committees. These committees, represented by the parents of the pupils, take a personal interest in the school of their district. Extensive improvements have been thus introduced. Although the school committees have no voice in school administration, they render valuable assistance in other matters pertaining to school. Classrooms have been decorated with proper pictures, libraries stocked with suitable books, school premises kept in proper shape, and trees planted on school grounds; not infrequently parents and teachers come together and a meeting is arranged for the purpose of discussing the various needs of their school. Commenting on the work of the committees, the director of education says:

> The substitution of school committees in place of boards of advice marks a distinct educational advance. A committee, having only its own school to care for, acquires a sense of ownership, with corresponding interest.
>
> In many places money has been raised and expended on improvements. Quite a number of schools have been supplied with pianos in this way. Altogether, thousands of pounds have been saved to the State by good citizens who have determined that *their* school, at any rate, shall not be in need of the help that *they* can give.
>
> Valuable as this is, I regard as of even greater importance the development of public spirit and personal interest—*our* school, no longer *the* school.
>
> By and by, perhaps, we shall have this interest so extended that no parent will pass the school without looking in and looking on for a few minutes. The parent has as much interest in the school as has the scholar, since upon it depends much of the future of the child. He should know what is being taught, and how.

NEW ZEALAND.

INTRODUCTION.

The war had seemingly little effect on the progress of education in New Zealand. Although 650 primary-school teachers were in active service at the beginning of 1917, and there were hardly any physically fit men teachers left in the entire school system, the minister of education says in his report for 1916 that "not only have the various administrative, educational, and social agencies of the department been kept up to the regular standard of efficiency, but a substantial amount of progress has been made, which even in normal times would justly be regarded with satisfaction."

Among the notable changes the report mentions the following: The raising of the standard of requirements for the certificate of proficiency; the granting of free places in technical schools for holders of certificates of competency (the latter certificates were issued to pupils who were unable to obtain the higher certificate of proficiency, but who showed special aptitude in manual subjects); the inauguration of a grading scheme for the classification of teachers; the extension of medical inspection; and a more liberal allowance for kindergarten schools.

According to the latest report of the minister of education the number of public schools in 1917 was 2,368, with an average attendance of 168,711, as against 2,355 in 1916, with an average attendance of 163,156.

The total expenditure of the Department of Education for the year 1917–18 was £1,809,187, an increase of £119,480 over the expenditure for the previous year. Of the total expenditure, 75 per cent was on primary education, 12 per cent on secondary education (including technical high schools), 4 per cent on university education, 3 per cent on industrial and special schools, 4 per cent on technical education, and 2 per cent on teachers' superannuation and miscellaneous charges.

RETARDATION OF PUPILS.

The question of retardation of pupils received a great deal of attention. Statistics show that the average percentage of retardation in standards 1 to 6, inclusive, is 19; the highest percentage is 24 in standard 3. The causes of this retardation are delayed school entrance, mental or physical defects of pupils, and transfer of pupils from one school to another. For the purpose of reducing this wastage of time, special classes for the care of backward children are to be established in all large schools. It is hoped that a number of children receiving special training for a longer or shorter period will make greater progress and ultimately join the classes with normal classification.

Of all pupils entering standard 1, only 59 per cent finish the primary course, and 41 per cent never reach standard 6. To enable the latter to receive some kind of industrial education a more elastic scheme of admission to technical schools was devised and put into operation at the end of the year 1917. According to the new regulations, pupils over 14 years of age who have left the public schools not more than six months previously without obtaining a graduation certificate may, on the recommendation of the school inspector, enter a free technical school. The pupils thus admitted must select subjects bearing upon a trade or industry, including agriculture and domestic science. They must not take any commercial subjects. Compulsory continued education is at present provided only at the option of the local authorities in some 17 small areas, but steps are taken to have it organized in the Dominion on a more comprehensive national basis. At the third general meeting, held in June, 1917, by the council of education, an advisory body on the matter of education, it was resolved "that it should be compulsory for every child between the ages of 14 and 17 years living within 3 miles of technical classes to attend such for three hours a week and 30 weeks a year." In compliance with this regulation of 1917, three more centers were opened for continued education of the youth.

CHILD WELFARE.

The health of school children is carefully guarded by a system of medical inspection and physical instruction which the Department of Education is vigorously pursuing. Medical inspectors do not treat, but examine, the children. In case defects are found, the parents are notified and urged to attend to the matter. If necessary, the school nurse visits the homes of the pupils and sees that satisfactory results are obtained. Medical inspectors render further assistance by delivering lectures to parents on such topics as diet, clothing, and the treatment of simple ailments. Lectures and demonstrations by medical inspectors are also regularly given to the prospective teachers in the training colleges and to instructors already in the service.

The work of physical instruction is now carried on in practically all the schools. Weak and defective children requiring special exercises are treated separately in so-called corrective classes. Great progress in the children's health has also been made in recent years by providing fresh-air schools for normal pupils.

Nor is the health of infants, i. e., children below 6 years of age, neglected. For some years New Zealand has registered the lowest percentage of infantile mortality for the entire world. This result is due to the splendid system of infant life protection conducted by the Department of Education and by private persons, the "Society for the Promotion of Health of Women and Children," founded in 1907 under the encouragement of Gov. and Lady Plunket. District agents and duly qualified nurses under the department visit the homes where children under 6 years of age are taken care of by their foster parents. In case the conditions surrounding the child in the foster home are found unsatisfactory, the license may be revoked and the child may be directed for care to some other place. More elaborate is the educational campaign conducted by the "Society for the Promotion of Health of Women and Children" and carried on by the so-called "Plunket nurses." These nurses are concentrated in some 70 points of the Dominion and visit both near-by centers and more remote districts in order to lend counsel and impart instruction in all that pertains to the hygiene of motherhood and the care of children. The services of the nurses, or, better, the specialists in child care, are at the call of any member of the community, rich or poor. Their duties are not properly covered by the term "nurses," as their fundamental aim is of an educational nature. Whenever a community expects the arrival of one of these nurses, the members of the local committee, who have been officially notified, make necessary arrangements for the visitor to speak at various gatherings of mothers and to hold public demonstrations relative to the care of children in addition to informal conferences in the local school and the instructional visits to the individual homes. An integral part of her duties also consists of correspondence with mothers who live in districts too remote to allow systematic visitation.

Thus the society concerns itself less with reducing the infantile death rate than with jealously safeguarding the health of children.

NATIVE SCHOOLS.

The Government supports a number of schools for the natives. At the end of 1917 there were in operation 118 native village schools attended by 4,622 Maori children. A large percentage of the Maori children also attend general public schools. A number of secondary schools for Maori children, under control of denominational bodies, are subsidized by the Government, which provides free places for the native children. According to reports of the minister of education the progress in education made by these children compares favorably with the school record of children of European parents.

SECONDARY EDUCATION.

With regard to secondary education, it is to be noted that of 9,517 pupils who in 1916 left the primary schools after having passed standard 6, 5,489 children, or 58 per cent, entered a secondary institution. Unfortunately, few finish the course. The average length of stay is two years and nine months for boys, and two years and eight months for girls.

The types of school that provide secondary education are: Secondary schools, technical high schools, district high schools, private secondary schools, and Maori secondary schools.

There are no definite regulations governing the curriculum of secondary schools. These schools are mainly governed by the syllabuses of the various public examinations and by regulations issued by the Government with regard to the instruction of pupils holding free places. According to new regulations issued in 1917, all junior pupils holding free places in secondary schools must "receive instruction in history and civics preparatory to a course in the elementary principles of economics to be taken at a later stage." In the new regulations provision is also made for instruction in home science, cookery, laundry work, needlework, and home nursing for girls, and practical agriculture and dairy science or some other vocational subjects for boys.

TECHNICAL EDUCATION.

Technical education is gaining more ground in the Dominion, judging by the increased attendance of students at the technical schools. Irrespective of enrollment of older students, the total number receiving instruction at all the schools and technical classes was 20,747, an increase of 1,056 over the previous year. Increased demand is made for classes in engineering and agricultural subjects. In a number of centers classes for farmers were conducted on subjects bearing directly on agricultural and dairying industries. These were well attended. There was also an increase in the number of classes bearing on various trades and occupations. At 22 centers 167 discharged soldiers received free tuition in technical schools. In a number of cases where the technical school lacked the necessary equipment and workshops the school cooperated with the local firms which provided proper facilities for discharged soldiers.

HIGHER EDUCATION.

The New Zealand University is an examining body, with four affiliated teaching colleges: Auckland University College, Victoria University College, Canterbury College, and the Otago University. The New Zealand University is a Federal institution with limited powers. It can not interfere with the internal affairs of the colleges which are administered by the various councils. Each of the colleges specializes in certain directions; Auckland University College in mining and commerce, Victoria in law and science, Canterbury College in engineering and science, and Otago University in medicine and dentistry.

The number of students in attendance at the four colleges in 1917 was 1,902—1,007 men and 895 women. This is a slight increase over the preceding year. As to the selection of courses, the majority, i. e., 44 per cent, took the arts course, 15 per cent studied medicine, 11 per cent engineering, 10 per cent law, and the rest took various other courses.

The total staff of the four colleges consisted in 1917 of 49 professors, 50 lecturers, and 32 assistants, demonstrators, etc.

With regard to new developments worth noting is the establishment of a school of architecture at the Auckland University and a course of instruction in anthropology at the University of Otago. In general the significance of ethnological studies is being more and more recognized by representative scientists, who urge that the New Zealand University should encourage this branch of learning by recognizing it in her examinations and by providing properly qualified teachers.

The New Zealand Journal of Science and Technology, 1918, vol. 1, No. 5, says editorially:

> Neglect of ethnological studies is greatly to be regretted for both individual and national reasons—individually because a knowledge of the main results of ethnological and anthropological research is a necessity for the understanding of civilized as well as of uncivilized man. The decay of custom is a long process, requiring many centuries. Thus the habits of thought of Yorkshire villages are still influenced by Scandinavian mythology. There is no section of the community more in need of such knowledge than ministers of religion, but, unfortunately, it does not yet form an essential part of their training.
>
> Nationally such studies are of far-reaching importance, because of the geographical position of New Zealand. We have in our midst a race backward in civilization—the Maori—and still bound by ancient custom of thought in spite of a veneer of alien culture. The proper treatment of the many problems thus involved is impossible without a knowledge of ethnology, and of the Maori people themselves, on the part of the legislators and electors. The probable absorption of the Maoris in the people of the North Island will produce a type differing from that in the South Island, and it is desirable that this problem should be properly envisaged by our thinkers.
>
> Any future expansion of New Zealand in the Pacific islands will bring further problems, for all of which ethnological knowledge will be necessary. Those who are directly concerned in the administration of these islands should above all receive such a training. New Zealand must play a part of some kind during the next five hundred years in the solution of the color problem—the relations between black, yellow, and white peoples. If it is to be a worthy part, there must be an increase of ethnological studies. This does not mean that a new subject should be introduced into the syllabus of the primary and secondary schools, for it would even now be possible for a teacher with the necessary knowledge to introduce very interesting and educative lessons on ethnology into the geography course. But a prior necessity is the training of teachers to a higher standard, and a beginning should therefore be made in the university.

Extensive revision has also been made of the courses of study at the Otago University School of Mines. The period of studies in mining, metallurgy, and geology has been lengthened from three to four years, of which the first three years of study are common to all three divisions and specialization occurs in the fourth. By this means a greater amount of general and especially geological training is given to students of all divisions, while additional advanced courses have been introduced in mining, metallurgy, and workshop practice.

In addition to the class work, all students must spend 12 months in practical work, the length of the vacation being arranged so as to permit the student to complete this work by the time the class work is finished. All students must spend at least four months in underground mining work, while an additional eight months must be spent in mining, metallurgical work, or in geological surveying, and a thesis prepared descriptive of some mining operations, a metallurgical process, or the geology of an approved area according to the division in which the student specializes.

SCIENTIFIC RESEARCH.

The importance of scientific research for the advancement of industrial efficiency has been realized in New Zealand, as in other parts of the British Empire, in the early days of the war. An attempt to coordinate science and industry was made as early as 1915, when several scientific and other bodies in New Zealand had been considering in what manner scientific and industrial research might be organized in the Dominion. The matter received, however, no official consideration until some time later, when at the request of the acting prime minister, the national efficiency board, in coordination with several other scientific bodies, evolved a scheme which was forwarded to the Government in January, 1918.

Some of the provisions of the proposed scheme are:

1. There should be established a board of science and industry, with responsible functions and substantial authority to encourage and coordinate scientific and industrial research in the Dominion.
2. There should be a minister of science and industry, who should be the chairman of the board.
3. An adequate sum, not less than £100,000, should be voted by Parliament to cover the expenditures for five years.

The board is also to have power to establish, award, and supervise fellowships and to see that the fellowship, tenable for two years, should be of sufficient value to prevent the holders from being attracted to other positions.

It was also suggested that the board of science and industry might (*a*) advise primary producers upon all questions of the application of science to their industries; (*b*) advise persons, firms, or companies engaged in industrial pursuits as to improvements in the arts and processes employed, and as to the utilization of waste products; (*c*) make recommendations as to the adoption in an industry of the results of investigations conducted under its direction; (*d*) undertake the investigation of industrial problems which, if unsolved, would obstruct the development of the industries concerned; (*e*) advise the Government in regard to the help that should be given to any new industry that is likely to be ultimately of value to the country, though at first it may not be workable except at a loss; (*f*) advise the Government as to which contribution, if any, should be made toward the cost of any research by the firms or companies benefited thereby; (*g*) on the request of the University of New Zealand, consult with that body in matters relating to the national research scholarships in its award; (*h*) consult with the General Council of Education, the University of New Zealand, the university colleges, and other educational bodies as to the line along which there could be brought about an improvement in scientific education, and cooperate with them and all others concerned in taking such steps as may lead to the better appreciation of the aims and advantages of science on the part of producers and the general body of citizens.

RECENT PROGRESS OF EDUCATION IN THE UNION OF SOUTH AFRICA.

By Theresa Bach,

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GENERAL DEVELOPMENT.

The Union, constituted by an act of Parliament in 1909, comprises the former self-governing colonies, the Cape of Good Hope, Natal, the Transvaal, and the Orange River Colony, known at present as the Orange Free State. The executive power is vested in the governor general, appointed by the British sovereign, and a cabinet of ministers, the members of which are chosen by the governor. Each Province is administered by a provincial council, with power to deal with elementary and secondary education. Higher education, in accordance with the act, is placed under the control of the minister of education for the Union.

The system of education maintained in the four Provinces is concerned primarily with the children of white parents. The education of the natives, who form the bulk of the population, remains in the hands of the missionaries, who maintain their own mission schools. The Government exercises some control over these schools and gives its financial support in the form of grants-in-aid. In all the Provinces education was made compulsory for the children of European extraction. No such provision exists for the children of other races. In some of the Provinces the tendency to increase educational facilities and to raise the compulsory age of the pupils has, in recent years, received official sanction by direct legislative measures.

So, for instance, at the Cape of Good Hope one of the most important features of the year 1917 was the amendment relating to compulsory school attendance of European children. An ordinance passed by the provincial council in 1917 makes the leaving age 15 instead of 14 and the leaving standard V instead of IV. The principle underlying compulsory education in that Province dates from the year 1905, when a school board act was passed making attendance compulsory for every child over 7 years of age and living within 3 miles of a State-aided school. Exemption from school was granted with the attainment of the age of 14 or the passing of Standard IV of the elementary school course. A further step in that direction was made in 1913 when it was generally felt that the time was ripe for an extension of the principle of compulsion. Accordingly, ordinance 16 of 1913 made it possible for the distance limit, the exemption age, and the exemption standard to be raised in selected areas. Finally, by ordinance 7 of 1917, the minimum exemption age for the whole Province was raised to 15 and the minimum school year to Standard V. The school authorities in the Cape Province are not satisfied, however, with the results attained, and point to the need of further compulsory extension for white children. Draft ordinance of 1919 contains the following paragraph:

> From and after the commencement of this ordinance regular school attendance shall be compulsory in the Cape Province for all children of European parentage or extraction who have completed their sixth but not their sixteenth year.

The important matter of free tuition is mandatory at the Cape only up to the compulsory limits. Consequently with the extension of the compulsory school age an attempt was made to extend the privilege of free tuition "up to and including the sixth standard of the primary-school course." A move in that direction can be seen in ordinance No. 15 of 1917 that empowers the department under certain conditions to pay the school fees of children whose parents are on active military service. This regulation applies not only to pupils attending schools under school boards but is applicable to any school not conducted for private profit.

Legislative measures for a larger school life have not been limited to the Cape of Good Hope. In the Province of the Transvaal a provision in ordinance No. 16 of 1916, issued by the Department of Education, authorizes the local school boards to raise the age and the standard of compulsion, if it is found desirable. This means that children over 15 years of age or those having reached the fifth standard may be compelled to continue their education at the option of the school boards. Furthermore, attendance in continuation classes can be made compulsory for children who are exempt from attendance at primary schools.

With regard to compulsory attendance in the Transvaal, various recommendations are proposed. Some school boards advocate that compulsory education should end with the attainment of the seventeenth year of age or the passing of the fifth standard; others recommend the sixteenth year as the age limit or the sixth standard as an alternative. As to compulsory continuation classes, there is a tendency to have the pupils attend school during the working hours for at least 10 hours a week.

Another regulation bearing upon increased school facilities for the children in that Province provides that a public school may be established in any country district where the attendance of not less than 20 pupils can be assured. The former regulation required a minimum attendance of 25. Although the present tendency of the department is directed toward centralization—that is, toward larger schools with a larger school attendance—the lowering of the requirements with regard to the establishment of other schools was necessitated in order to meet the needs of children who could not otherwise be brought within the reach of larger institutions.

A scheme inaugurated by the Department of Education in the Transvaal further provides Government grants for private schools recognized by the authorities as efficient. These grants will undoubtedly raise the standard of the private institutions and bring them in line with the schools controlled and administered by the various school boards of the Province.

At the end of September, 1917, the total number of white pupils enrolled was 116,491; of native and colored children, 138,397. The total number of pupils enrolled in Government-aided schools was 254,888, the average attendance being 86.4 per cent. The total number of teachers was 10,215, of whom 6,739 were holders of professional certificates.

The Government's expenditure on education during the fiscal year ended March 31, 1917, was $4,751,000, thus apportioned: Head office (administration), $51,000; inspection, including transportation, $189,000; training of teachers, $429,000; schools under school boards (grants in aid), $2,979,000; schools not under school boards,

$182,000; schools under missionary control, $556,000; industrial schools, $80,000; good-service allowance, $260,000; pension fund, $22,000; incidental expenses, $3,000.

LANGUAGE PROBLEMS.

The language question presents considerable difficulties in South Africa. At present English and Dutch are recognized as the official languages in the Union, a fact which affects the schools to a considerable degree. In the Cape Peninsula instruction in the mother tongue is provided up to and including Standard IV, when the second language is gradually introduced. The languages hitherto taught in public schools were either Dutch or English, but as the conversational medium of large circles of the population is Afrikaans, or Africander Dutch, the school authorities sanctioned the introduction of this tongue as a regular school subject in the non-English classes. The more literary Dutch has thus been superseded by Afrikaans, especially in the lower grades of the elementary course. An ordinance promulgated on May 17, 1918, and known as Education (Afrikaans) Ordinance No. 14, 1918, reads:

> Where in any public school to which the provisions of the Education (Language) Ordnance No. 11 of 1912 apply, the Dutch language is lawfully used either as a prevailing medium or as one of the media of instruction, it shall be competent for the Department of Public Education, on the resolution of the responsible school committee, or school board where there is no committee, to authorize the use of Afrikaans instead of Dutch (Nederlands) as such medium of instruction in all or in any classes of that school up to and including the fourth standard.

Thus by adopting Afrikaans the Cape of Good Hope has set itself to solve the problem of not two but practically three languages. The ordinance also permits pupil teachers to answer examination papers in Afrikaans, as well as in Dutch or English.

In the Transvaal the use of Afrikaans as a medium of instruction was sanctioned by the school authorities sometime ago. Of more recent date is the introduction of Afrikaans as a school subject. This radical change has been universally welcomed by teachers and pupils in schools where hitherto Dutch was the medium of instruction. In many instances, however, the introduction of Afrikaans had to be postponed for lack of the necessary textbooks.

One of the school inspectors in the Transvaal, referring to the new ordinance (Transvaal Educ. Dept. Rep., 1917), states:

> Great things are expected of Afrikaans, and teachers are everywhere enthusiastically studying the subject in order to "see it through." For the first time in the history of the Africander child he will find himself in a position of real equality with the other European children. In the past the study of language (which after all is little more than a medium of thought) was tak-

ing up practically all his time, while children of other countries were absorbing new ideas almost from the day they entered school.

In Natal, which is colonized almost throughout by British, the bi-lingual ordinance came first into operation in the year 1916, although a practical bi-lingualism has long obtained there with the approval of the department. The new ordinance reserves to the parents the right to decide as to the medium in which their children shall be instructed. In the Orange Free State, except where the parents object, both English and Dutch are taught to all children, and where possible, are used as equal media of instruction.

The provisions of the language ordinances in the various provinces are usually met by setting up parallel classes in the lower standards and then teaching each language in its own medium; general subjects, such as history and geography are taught in the higher grades in a mixed medium, unless the school is large enough to allow of a similar arrangement as prevails in the lower standards.

SECONDARY EDUCATION.

Provision for secondary education is made by public high schools or by advanced classes connected with the elementary schools. Present efforts are directed to the promotion of these classes to high-school grades wherever the scheme appears to be feasible. In the Province of the Transvaal 10 high schools have thus been created in addition to the 10 already in existence. The question of transition from primary to secondary schools has not been entirely settled in that Province. The Transvaal Teachers' Association is of opinion that separate high schools should be built only for pupils who intend to matriculate.

For the rest of the pupils the association urges the maintenance of advanced classes in the primary schools. The reason given by this body of teachers is that transfer to a secondary institution will cause many pupils to drop out. The stand taken by the higher school authorities, on the contrary, favors the separation of primary and secondary schools. Discussing the advantages accruing from the latter arrangement, the director of education for the Transvaal, in his report for 1917, says:

> It (the transfer) is an event which stirs and satisfies the impulses and ambitions characteristic of the awakening of adolescence. The spirit of adolescence is the spirit of adventure; it is a time when hunger for intellectual achievement, for the life and associations of youth, for freedom from the trammels of childhood, is imperative. Migration to a higher institution is just what satisfies it. Transfer is thus, in the first place, justified by the physical and mental demands of the pupils themselves. In the second place, it is justified by the criterion of efficiency. This will more certainly be gained in an institution where the head and his staff devote themselves entirely to secondary needs

and secondary subjects. Economy is a third argument. Science is going to bulk largely in secondary curricula in the future, and well-equipped laboratories will be essential. They can not be provided at a large number of centers. The same thing is true of libraries which must be good enough to afford a field for adventure in history and literature. Finally, there is the all-important question of playing fields and organized games. The first 11 caps or colors won in strenuous competition is the ambition of normal youth.

In the Cape of Good Hope better adjustment and the abolition of the overlapping between the elementary and the secondary school course have been effected in recent years. The seventh grade of the elementary schools was abolished and the elementary course confined to six grades, these to be superseded by the secondary school course with a four-year syllabus.

The secondary course is to be reorganized with a view of providing general and vocational training. This, at least, is the proposal of Dr. Viljoen, the superintendent general of the Cape Province, made before the Congress of the South African Educational Union, held on December 27, 1918. The scheme involves the inauguration of eight courses, each with a four-year syllabus: A preparatory course leading to higher education, and a general course for those not intending to pursue university studies; further, preparatory courses for the public service, the teaching profession, and the courses suitable for those who intend to adopt commercial, technical, agricultural, or domestic pursuits. It is proposed to introduce these courses in a limited number by way of experiment rather than to lay down hard-and-fast rules and regulations for the entire scheme.

Training of teachers.—With regard to the training of teachers in the Cape Province, several tentative proposals have been made by Dr. Viljoen.

The present third class teachers' certificate (senior) course is to be replaced by a lower primary teachers' certificate course, to commence after Standard VI of the primary school course had been completed and to extend over a period of four years. . Further, the superintendent general proposed the establishment at training colleges of a higher primary teachers' course extending over a period of two years beginning after the completion of a full four years' course at a secondary school. In addition to these two courses the training schools and colleges are to offer courses for teachers in infant schools and for those intending to specialize in subjects such as domestic science, manual training, drawing, music, commercial subjects, etc.

The supply of certificated teachers, although inadequate for existing needs, shows a steady increase, if one makes reference to the records of the year ended June 30, 1918. It appears that the teaching posts in the Cape Province increased during the year by 198; the number of certificated teachers employed increased by 255; while the number of uncertificated teachers employed decreased by 57. Compared with other Provinces of the Union the Cape employs 39 certificated teachers for every 1,000 enrolled pupils, while the Transvaal employs 25 certificated teachers, and the Orange Free State 28 on that basis.

AGRICULTURAL EDUCATION.

Scientific training in the principles of agriculture and stock raising is making rapid strides in the Union. This training is carried on at four well-equipped agricultural schools conducted by the Department of Agriculture, as well as a number of experimental farms. Two of these schools are situated in the Cape Province, one at Elsenburg and the other at Grootfontein. The third is located at Potchefstroom, Transvaal, and the fourth at Cadara, Natal. A fifth school has been built near Bloemfontein, Orange Free State, but due to the war conditions, its inauguration has been postponed. The cultivation of the soil, experimentation in plants, and the breeding of cattle are conducted on an extensive scale, not only for the benefit of the students enrolled, but also for the general farming population. Horticultural and poultry divisions are maintained in connection with each institution. Admission is based on the completion of the elementary school. The regular course of instruction covers a period of two years. Special short courses are also given during the months of June and July each year. These institutions also assist the farmer in matters relating to the various phases of farming by means of correspondence, publications, lectures, and demonstrations.

Experiments in soils, crops, and fertilizers are conducted at the school farms, at detached experimental stations, and by means of cooperative experiments with individual farmers.

The Government Wine Farm near Cape Town offers a three years' practical training with some theoretical instruction. Agricultural faculties have also been established at the University of Stellenbosch, and at the Transvaal University College, which now forms part of the University of South Africa.

COLLEGES AND UNIVERSITIES.

The university problem, closely connected with the political and social conditions of the country, have in recent years undergone far-reaching changes advocated in South Africa for the last decade. With the inauguration of the Union, higher education was placed under the control of the central authorities or the minister of education. Until a few years ago the university was a purely examining body, which dominated a number of small colleges serving only local interests. Various proposals for the creation of a strong national university, where the youth of the country could receive a common intellectual training, led to legislative measures with the result that the entire system of university education in South Africa was placed on a higher plane.

The new scheme put in operation April 2, 1918, was reorganized on the following basis:

1. The South African College became the University of Cape Town.
2. The Victoria College at Stellenbosch was granted a separate charter and became the University of Stellenbosch.
3. The six remaining colleges—those at Grahamstown, Wellington, Bloemfontein, Pretoria, Johannesburg, and Pietermaritzburg—were federated in the University of South Africa, a successor of the University of the Cape of Good Hope, with the administrative seat at Pretoria.

The policy of the newly created institutions is reflected in the following statement from a Cape Town correspondent published in the London Times Educational Supplement for February 13, 1919:

> The University of Stellenbosch shows a strong tendency to ally itself with pronounced Dutch-Nationalist sentiment, and has already become its chief intellectual center. Its students are almost exclusively Dutch-speaking, and instruction is being increasingly given through the medium of the Dutch language. Indeed, so strong has the feeling of separate identity become that even simplified Netherlands Dutch is in danger of being cast out in favor of South African Dutch (Afrikaans). It would seem that the future of the University of Stellenbosch is largely bound up with the fate of Afrikaans. If that language succeeds in establishing itself as the recognized sister medium to English, and in developing a literature (as it shows promise of doing), and if the government of the university is alive to the dangers of an exclusive parochialism, especially in the matter of appointments to the staff, then the University of Stellenbosch will become an intellectual and moral center of influence of a peculiarly interesting and valuable type.
>
> The University of Cape Town continues the tradition of the old South African College, which always earned the kicks of extremists from either side because of the broad South African nationalism which has always characterized it. Ordinarily (though the war has made a difference) its students have been English and Dutch in about equal numbers, and the bitter political and racial struggles of the country have had but faint echoes within its walls. During the war it has been criticized with about equal vehemence by the left wing of each racial group, and the present confidence it enjoys and the phenomenal development it has recently achieved abundantly justify its maintenance of the old attitude. Language difficulties are well-nigh insuperable, but they are being handled in a reasonable spirit.

Stellenbosch specializes in agriculture, while the University of Cape Town is developing the faculties of engineering and medicine. The faculties of law and education are also likely to become stronger in the latter institution.

EDUCATION OF NONEUROPEAN CHILDREN.

The non-European population comprises the natives, the mixed races or the Eurafricans, and a small contingent of East Indians.

The education of the natives is entirely the work of missionary organizations. The Government supports the mission schools by means of grants, but the maintenance of schools devolves upon the missionary bodies. Government control over native education is exercised through the following agencies: Financial grants-in-aid, certification of teachers, issuing of syllabuses, inspection of schools, and examination of pupils. The course of study is based on the European system, with slight modifications to suit the native children. Instruction in all the Provinces is imparted through the medium of the vernacular, especially in the lower grades.

The introduction of handicrafts in native schools on a larger scale than has hitherto been practiced is being urged by school authorities familiar with the problem of native education. One inspector of schools points out that "pupils accustomed to the free unfettered life of the veld and kraal must find some outlet." And nothing, he maintains, would so alleviate the sudden transition from the unrestrained liberty of the herdboy to the ordered discipline of a school than lessons in grass weaving, clay modeling, woodwork, and needlework. These subjects should be encouraged and introduced in all the schools for native children. Consideration of industrial training to include instruction in agriculture and the native arts and crafts is also urged by Dr. Loram, an inspector in Natal. In his book "The Education of the South African Native" the author recommends the taking over by the Government of all the native schools with a view of establishing a well articulated system which shall consist of elementary, intermediate, high, and industrial schools and training institutions with courses of study complying with the social and industrial needs of the natives. The retention of the vernacular is also strongly recommended.

Missionary organizations provide schools not only for the native but also for other colored children in all the Provinces except the Transvaal. In that Province the schools for Eurafricans are under direct administration of the department and are supervised by the school boards on the same basis as the schools for Europeans. At the close of the year 1917 there were in that Province, in addition to schools for European children, 19 Government schools for colored children, with an enrollment of 2,681, and 330 subsidized mission schools with an enrollment of 21,421.

In addition to the mission schools, the Government subsidized a number of Indian schools, notably in Natal, where 39 such schools receive grants-in-aid, while 5 schools for Indian children are directly maintained by the department of that Province.

THE PROGRESS OF EDUCATION IN INDIA.

By Walter A. Montgomery,

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INTRODUCTION.

In no other country of the world is the subject of education more complicated than in India. The system maintained or sanctioned in the 15 Provinces which are directly or indirectly under British control is further complicated by considerations indissolubly intertwined with the historical, climatic, racial, religious, and strictly agricultural characteristics of the people. Historically, the system still shows in many fundamental features of the vernacular schools the native system which prevailed in the larger and more powerful Provinces—such as Bengal, Bombay, and Madras—before the official consolidation of British power about 60 years ago; and the successive modifications made by the several education commissions, provincial and imperial, have left indelible traces upon it.

India's racial complexity is a commonplace, more than 40 distinct races going to make up her total population of over 250,000,000 (estimated, 1919). As a consequence the several Provinces representing the original nuclei of diverse tribes have developed widely varying systems of administration and instruction. This tendency has been fostered by the definite policy of the British Government, which has been loath to attempt to impose upon India, as a whole, one rigid and uniform system, but has wisely sought to confine itself to maintaining educational activities in their broadest and most useful aspect. The difficulties inherent in religious differences and jealousies, and in their inevitable consequence, the caste system, were unlimited; and even a partially successful harmonizing of these, so far as to effect some system of popular instruction, is in itself a triumph for British colonial ability. Yet in face of all these abstacles, multiplied in many phases in almost every Province, more than fair success has been achieved since the original lines of educational polity for India were laid down. Marked progress is to be recorded, especially during the last reported quinquennium (1912–1917), the period adopted by the Indian authorities for a systematic and comprehensive report upon the educational conditions of the Provinces.

A consideration of the effects of the war, direct and indirect, on Indian education must necessarily precede a more detailed investigation of conditions in that country. The former have varied according to the location of the Province under consideration, whether situated upon the sea coast, and possessing a large port of embarkation of men and supplies, or remote from visible connection with the war. To select from those most closely concerned with the war: In the Madras Presidency, perhaps the most marked effects were the cutting off of the recruiting of teachers from England and Europe and the vacancies due to the withdrawal of the teachers for service; financial difficulties of growing seriousness making it necessary to postpone many educational projects; and, perhaps most marked for this Province, the difficulties encountered in the matter of the missionary societies maintaining a system of schools. Most of these were German and Lutheran educational missions; and their taking over by the Government and continuation with changed committees were fraught with many perplexing questions.

In the Bombay Presidency the effects just noticed were also evident; but in this Province a greater gain has been pronounced in the interest aroused among people of all classes, not merely among the children in the schools, in the great world issues, in the broadening of knowledge and mental horizon, and in the quickened appreciation of the unity of the British Empire. In Bombay the very useful step was taken of applying the machinery of the schools to explain to the people at large the real causes and progress of the war. This was done by daily talks by the teachers, by the periodical visits of the inspectors, by the dissemination of Indian newspapers and pamphlets translated into the different vernaculars of the Presidency, by lectures and lessons on the war loans, and by the offer of prizes for the best essays on the war written by students of secondary and higher education. It is doubtful if all other activities of the schools were as valuable for the mental awakening of the people as this, which might be regarded as merely a by-product of the war.

In Burma fewer adverse effects of the war are to be noted than in any other Province. Though for economic reasons attendance declined in the lower primary vernacular schools, many important changes in administration and instruction were carried out especially during the last two years of the quinquennium under consideration. The long-discussed and very important transfer of municipal schools to the provincial government was finally effected early in 1917; grants of half the salaries of teachers were restored in the European schools and in most of the aided Anglo-vernacular schools; and the maintenance of these schools was transferred to the Province. Other special administrative changes will be indicated under their proper headings.

In the larger field of education throughout the Indian Empire financial considerations for the first two years of the war stopped the allotment of the imperial grants decreed in 1904. In certain Provinces a marked decrease was shown in the attendance in the primary schools. But as an offset to these material disadvantages there were compensating advantages throughout India at large as indicated in the reports of representative Provinces.

The most vigorous stimulation of educational interests has come, within the past two years, from a far-reaching project of political independence for India, culminating in the presentation to the House of Commons of the Montagu-Chelmsford Report in July, 1918. The officials whose names are thus linked are the secretary of state for India and the viceroy. Both were thoroughly conversant with the needs of India; both had for years studied the part that education must play in the political welfare of the peninsula; and the report, in its largeness of view, its exalted vision, its kindly sanity, and its deep sympathy with the unrepresented millions and even with the classes depressed by the oriental caste system, is an honor to British provincial administration. It is difficult to believe that barely a century marks the difference in time between the spirit of this report and that of rulers of the type of Warren Hastings. The broad outlines of the report are as follows:

1. The report prefaces its review of political and social conditions with a survey of the evolution and present state of education in India, basing all recommendations upon the prinicple that "educational extension and reform must inevitably play an important part in all political progress of the country."

2. The report concludes that the original decision of 1835, with which the name of Lord Macaulay has always been connected, to impart western education to the natives by the medium of English was at that time the right and indeed the only road. The varied demand for enlarged opportunities, now rising with increasing force and including always more people, is itself only the logical result and the vindication of the work laid down by that decision; but—

3. It has brought an illiteracy of the masses and an uneven distribution of education which must be ended. No state of affairs which includes 6 per cent of the total population literate and less than 4 per cent under instruction can be longer tolerated.

4. The steadily growing cleavage between the educated minority and the illiterate majority is the necessary result of the educational system adopted, and the fruitful cause of political and social unrest. From every point of view this cleavage must be stopped; reforms in education must precede all attempts at governmental and political reform.

5. Results which have been economically disastrous have been manifest in the fact that the exclusively literary system of higher education has produced a growing native *intelligentsia*, which can

not find employment and becomes humiliated and soured, affording the best possible soil for discontented and anarchistic teachings. Education is directly responsible for this political and governmental ulcer on the body of the country. Only of late years has any complaint arisen against the real element which is wrong in the situation, namely, the inadequacy of facilities for training in manufactures, commerce, and the application of science to active industrial life.

6. Examining the charge that the traditional educational system of India has failed in character development, the report finds that the question trenches upon the very complicated domain of religious belief, which in India, as in all primitive countries, is crystallized along racial lines. The Governmental schools have either utterly ignored the problem and attempted no moral instruction, or, if a few here and there have attempted it, the disadvantages under which the teachers labor, the indifference of children, and the hostility of parents have been so great as to nullify all attempts. The mission schools alone have dared to inculcate ideas of duty, discipline, and civic responsibilities and obligations, and in this field they have had results which are worthy of admiration.

7. The report, replying to the criticisms of the very limited diffusion of education in India, recalls the conservative prejudices of the country which rigidly maintaned themselves until the world events of the last few years suddenly began to break them up. That they are breaking and yielding is seen in India's undeniable change of attitude toward female education. But nothing has yet been done to put an end to the profound educational disparity between the sexes which must always hopelessly retard any real social or political progress. Again, peculiar difficulties arise from the predominantly agricultural nature of the population. Such a population, traditionally suspicious of change, can be reached only by making agricultural education increasingly practical. At bottom must always rest the need of differentiating primary education according to the needs of the people to whom it is applied.

8. The report concludes by emphasizing the urgent necessity of an enormous development of educational opportunities side by side with any extension of political activities, basing all upon the contention that "political thought in India is coming to recognize that advance in all lines must be influenced by the general educational level of the country."

Another report, akin in spirit to the Montagu-Chelmsford Report and upon which were based many of its conclusions, was the Industrial Commission Report, presented early in 1918 and embodying the results of many months of investigation in the leading Provinces of India. Though primarily economic in subject and aim, it, like the Montagu-Chelmsford Report, was of distinct value educationally.

It brought clearly to the front the extreme "topheaviness" of a system of education in which less than 3 per cent of the total population are enrolled in the elementary schools; in which the average duration of school life is less than four years and nearly half the children are in the infant sections of the primary; and in which a relapse into illiteracy in adult life is the rule; whereas in the field of higher education the percentage of total population enrolled, one-twentieth of 1 per cent, is nearly equal to that of England, one-sixteenth of 1 per cent, and considerably larger than that of Japan, one-thirtieth of 1 per cent. In the field of university education alone, India shows one-fortieth of 1 per cent to Japan's one-seventieth of 1 per cent of total population. In the estimation of the report, this "topheaviness" could only be cured by an efficient, free, and compulsory system of education, and by the building up of a modern progressive and economic society. Furthermore, India is the only country in the world where the educational ladder, fragmentary at best, has its higher end in another country. This evil, too, must be cured by the further establishment in India of centers of professional and cultural learning for native Indians, themselves graduates of the continuous system of schools below.

ADMINISTRATION OF SCHOOLS.

In the domain of administration as such the student of Indian education is confronted at the outset by the lack of any compulsory power vested in the central imperial educational authority. No parent is compelled by imperial regulation to send his child to school; nor is any person prohibited from opening a school or positively required to take out a license in order to do so. The system is decentralized throughout.

As regards the relation of the Imperial Indian Government to education, in general it may be said that it is advisory and promotive:

> The Government of India * * * considers questions of general policy, correlates when necessary the lines of advance made in the various Provinces, examines, approves, or submits to the secretary of state for India schemes which are beyond the sanctioning power of the local governments, and allots imperial grants.

In order to administer the increasingly larger field covered by these activities, the post of director general of education was abolished in 1910, and a member for education was added to the imperial executive council. In April, 1915, the post of Educational Commissioner was created, whose duties are somewhat akin to those of the Commissioner of Education of the United States:

> He tours extensively, discusses questions of educational polity with local governments, and advises the department on educational cases. At the same time a small bureau of education was reestablished for the collection and dissemination of information.

Each provincial government has a department of public instruction, presided over by an official usually designated as the director of public instruction, appointed by the provincial government. On the side of public education the educational powers of the Province are shared with local bodies such as rural boards, municipalities, and even private associations and individuals. All these latter are themselves required by law to provide facilities for primary education, and some are permitted to provide other forms of education in addition. The first piece of educational legislation of a compulsory nature ever enacted in India was that passed by the legislature of Bengal early in 1918. The act is noteworthy in that it is constructed entirely along the decentralizing and autonomous lines which form the distinctive feature of the Montagu-Chelmsford Report; and so representative is it of the dominant thought of the most advanced Provinces that the councils of Madras, the Punjab, and Behar have signified favorable action if it should be submitted to them. It strikes at the very root of the mass illiteracy of the Province, applying its provisions equally to both sexes (a signal advance over eight years ago, when a similar provision was defeated), making the period of compulsion to include the whole of the child's eleventh year and thus giving a minimum of five years of school attendance. The compulsory feature is not, as yet, applied to rural areas, but schools are provided in each of the more than 1,100 villages of the Province containing more than 1,000 inhabitants and at present without a primary school. No fees are allowed to be charged in any grade of school work.

Any class or community may be exempted from the operation of the act by the local provincial government only in such case as the municipality can not arrange satisfactorily the education of such children, and they are properly instructed by other means. In the vital matter of imposing penalties upon those persons employing for profit children who ought to be in school, it is to be regretted that economic interests caused a departure from similar provisions laid down in the Fisher Act; and so fully recognized was the national necessity of child labor both in organized industries, on farms, and in the home, as to call for compromise by which only those are subject to penalty who employ children of school age in such ways and at such hours as to interfere with their efficient instruction.

The weak point of the act is, confessedly, the vagueness of the responsibilities of the State in the event that local bodies, through poverty or neglect, fail to provide proper instruction. But the continuance of the Government quota to local bodies is in no way affected by the act; and the lively interest uninterruptedly manifested by the provincial governments in the past furnishes every guarantee that the danger of the Government not making subsidies to deserving local boards is imaginary. Indeed, much is expected in the way of the development of local independence from the very knowledge that local delinquency can not as now rely upon the provincial government to supplement inadequate appropriations. The act has been commended by the school and secular press. The Times of India well summarizes the situation in saying that the act must and will be applied "along the sound principle that whether State finances are flourishing or the reverse, primary education is a necessity for which money must be found."

As regards the machinery by which provincial governments administer public instruction, the director controls a staff of inspectors and the teaching staff of the schools in so far as the teachers are employed by the Government, and performs such other duties and wield such other powers as usually belong to him in his capacity of agent of the provincial government. The organization of the inspectional machinery is generally based upon the unit of the revenue division of the Government. In the Punjab, however, and in Bengal, as secondary schools are numerous, second and assistant inspectors are added, generally in charge of all local education, and are expected to advise the divisional school officials on policies and related matters. The detailed inspection of primary schools, however, is incumbent upon deputy inspectors, one for each district. There are also special inspectors for European schools, for Mohammedan education, and in localities where they are needed, for the teaching of Sanskrit, Arabic, and Persian. In the larger cities expert inspectors have recently been appointed in the subjects of manual training, drawing, and science. In addition inspectresses for girls' schools are employed so far as the climatic and social conditions make it possible. Medical inspection has made encouraging progress, especially in the Punjab and in Bihar and Orissa, in spite of the serious interruptions caused by the war.

Unfortunately, all the Provinces report grave limitations in the inadequate number of inspectors, in the narrowed scope of the work possible, and in a popular indifference which cripples the efficiency of the service. The reports show also that the inspectional system, if it is to give adequate supervision to primary schools, especially those in villages and remote districts, urgently needs clearer definition and better coordination of its several agencies and a large increase (especially in Bengal, Bombay, and Madras) of the inspecting staff, burdened as this is by many new duties of increasing complexity.

The most important agency, however, both of control and direct management is constituted by the local educational bodies, which include rural boards and municipalities. Indeed, they may be regarded as the foundation upon which the primary educational system of India rests. Varying widely in areas covered in the several Provinces, the rural boards are supreme in matters of education and in those pertaining to means of communication. Municipal boards in cities and towns have corresponding responsibilities of providing instruction. The supreme importance of the functions performed by the local bodies of both types, and the wide diversity of their responsibilities and scope, well illustrate the decentralized nature of educational polity in India. A summary of the salient legal powers and duties in the several Provinces is given:

1. In Madras the municipal act requires the municipality to provide for the school instruction of all children of school age, but the responsibility is limited by the phrase "so far as the funds at their disposal may admit."

2. In Bombay and the United Provinces the law requires reasonable provision for primary schools. In the latter the act requires the municipalities to expend on primary education at least 5 per cent of their normal income after the deduction of income from special modes of taxation. In the city of Bombay the law requires the corporation to make adequate provision for maintaining, aiding, and accommodating private schools, but provides that in the event of education becoming free or free and compulsory, one-third of the additional cost shall be paid by the Government.

3. In Bengal the former rule requiring the municipality to spend 3.2 per cent of its ordinary income on education has been repealed, but this is taken as a suitable standard; and also in the Punjab, Burma, and the central Provinces the acts are permissive only, requiring only the application of certain funds to the object of education, with varying requirements as to the funds from which such funds are to be drawn. In Burma it is provided that the maximum expenditure for education shall not exceed 5 per cent of the gross annual income.

4. In Assam it is provided that the percentage spent on primary education must not fall short of that represented by the average of the expenditure of the previous year and that of the year 1904–5, which is taken as a representative basis. The establishment of a board charged with oversight of all primary and middle vernacular schools is left optional with the Government.

5. The procedure throughout India varies greatly in the grades of schools under the charge of local bodies. In the majority of the Provinces the functions of local bodies are not limited to primary education, but their chief concern is with the primary schools. Most of them give aid to privately managed schools, and therefore wield a legal power over the latter. The extent and method by which the provincial government shares in the maintenance and control of primary schools are of great complexity. In most instances the provincial government is largely guided by the advice and wish of the local board, provided always that the latter evinces reasonable generosity and feeling of responsibility for primary education.

During the five years under consideration the most marked tendency both in Government and education was that to grant wider and larger powers of government to the local authorities. This culminated in June, 1918, in the plan issued by the Imperial Government of India, definitely disclaiming any policy of general compulsion as being unwise under present conditions, but urging all local bodies to assume the burden of "a solid advance toward mass education."

additional expenditure for teachers and inspection is to be borne by imperial and local governments, that for the establishment and maintenance of physical facilities, buildings, etc., necessary to double the enrollment of boys in the primary schools—the goal set within 10 years—to be borne by the local boards.

As matters stood up to that time, local bodies managed the comparatively few local "provided" schools and had control of aided schools. Up to 10 years ago, three-fourths of the primary schools were under private management, but since that time the tendency has been for "provided" schools to gain much faster than aided (missionary) or unaided (native) schools; so that in 1917 more than half the pupils throughout India in attendance on primary instruction were in these schools. An interesting exception must be made in the case of Burma, the Province which shows the highest percentage of literates. Here primary education is in the hands of the Buddhist monks. Elsewhere unaided schools diminished and provided schools increased so rapidly that the authorities see in this a proof that "there was left no large outer circle of indigenous institutions suitable for inclusion in the public-school system." The reasons for the rapid growth of board schools during the past five years are that better education can be secured and at less than half the cost of the unaided school, and that pupils remain much longer in school. The policy of expanding primary schools, of including aided (missionary) schools, and of encouraging unaided schools also to come under Government management has been steadily pursued by the school authorities. Under the new action of the Imperial Government of India, wider scope for initiative has been allowed the local boards; but the duty still rests upon provincial governments to encourage primary education and, where needed, to assist in maintaining it by special educational grants.

It has been shown that the Imperial Government has little control over education, yet it plays a great part in aiding schools, chiefly out of funds realized by nation-wide taxation. According to local needs, it is free to make, and does make, a considerable assignment of revenues for definite educational purposes. Similarly, local and municipal funds realized by taxes (usually from "land-cesses") levied by local bodies may be supplemented by provincial funds. In general, the elasticity with which taxes of either of the three categories may be applied to educational purposes is absolute, being limited only by the provision that funds of, and for, a given Province may not be diverted to another.

As an offset to the wider power and greater responsibility assigned to the local boards as indicated above, a contrary tendency is to be noted in the way of administrative centralization. This is not general, but as it concerns the two great Provinces of Bengal and Bombay it should not be passed over without mention. In them decrees in council have transferred certain duties formally wielded by the boards to the inspectors and to the college authorities, and have delegated executive functions to the directors of secondary schools. It is claimed that efficiency has been secured without a sacrifice of the good of the schools. In Bengal especially the result has been to vest in the director of public education powers hitherto unpossessed by him of appointment, transfer, dismissal, and general control of officials of low grades in the provincial educational service.

CLASSIFICATION OF THE EDUCATIONAL SYSTEM.

The traditional and most convenient classification of the educational system of India is that into public and private institutions. Public institutions are those offering a course of study prescribed or recognized by the provincial department of public instruction or the provincial university and certified by competent authority to have attained the required standard. In point of management, public institutions are divided into those managed directly by the provincial government, or by local rural or municipal boards, and those managed by societies or individuals, aided by provincial or local subsidies, or supported by fees, endowments, or subscriptions. Private institutions are those financially independent of all aid, and excluded from the above categories. They are exclusively conducted by missionary activities of religious bodies. Following yet another line of cleavage from the above, the racial and lingual-racial, the classification is adopted of the vernacular, Anglo-vernacular, the English, and the Mohammedan.

Under the vernacular falls, of course, the great majority of the schools of India, the predominant feature being the vernacular primary school, which educates the native child from about 5 years of age, using the local vernacular dialect alone as the medium of instruction up to 10 or 11. The usual division is into two stages, the lower primary, of four years, and the upper primary, of one, two, or three years. The greater number of the pupils never advance beyond the lower primary, a fact which constitutes perhaps the most serious phase of the problem confronting the educational system of India; and the actual length of the average pupil's schooling is less than four years.

The next higher division is the middle school, which includes (*a*) the middle vernacular, really a continuation school giving instruction chiefly in practical subjects, without English, and leading to no higher standard, and (*b*) the middle English school, the beginning of the Anglo-vernacular division. This is the first school which offers opportunity to a native child to pursue his education, and contains standards preparatory to the high school and articulating with it. The high school admits both natives and Europeans, and in most Provinces includes more than the American use of the term conveys, not only the essential high-school subjects, but also the middle standards just indicated, and even occasionally the last year or two of the upper primary.

Above the high schools are the colleges, which are (*a*) those of second or intermediate grade, corresponding in general to the American junior college of two years; and (*b*) those of the first grade conferring the B. A. or the B. Sc. within four years from the completion of the high school and the M. A. or M. Sc. within five or six years therefrom.

PRIMARY VERNACULAR SCHOOLS.

The primary vernacular school is the pivot of popular education in India. Except in a few districts, it is attended almost exclusively by boys. Instruction is sometimes continued through the middle vernacular classes, but the overwhelming majority of children never advance beyond the lower primary. In 1917 the primary schools and the primary departments annexed to other schools numbered somewhat over 140,000, with 6,748,101 pupils enrolled. This was an increase of 16 per cent over 1912, but registered an increase of only 2.8 per cent of the total population. Only 29,313,545 rupees are expended on them, a per capita of 4⅓ rupees ($1.30). The low proportion of expenditure on elementary as compared with higher forms of education is the startling and significant feature of the entire situation, along with other facts reenforcing the well-known indictment of "topheaviness" against the entire system.

The evil naturally varies in intensity from Province to Province. Bombay and Bengal pay better teachers' salaries, and the expenditure upon primary schools in these two Provinces is less disproportionate than the average; but the evil of overcrowded and unequipped primary education is substantially as stated. Attempts have been been made, notably that in 1916–17 by the government of Bihar and Orissa, for the expansion of primary education by the district boards with the object of doubling the percentage of children enrolled in schools by opening additional schools and by a species of consolidation of schools. Another problem pressing for solution but for which none has been found is that presented by the fact that the school child of India abandons school within less than four years and between 10 and 12 years of age, and often relapses into complete illiteracy.

In the face of these problems changes, such as those in the curricula and methods of instruction, seem of minor consequence. Only in the western division of Bengal can a new curriculum be said to have been prepared. It was to be brought into force in 1918. The differences between the curricula for rural and for city schools are generally unrecognized. In some Provinces, in the attempt to keep boys in school longer, the directors have striven to give an agricultural tinge at least to education in rural schools by requiring the teachers to call attention to plant and animal life, to make reading and arithmetic questions concern themselves with agricultural methods and production, and to impart instruction in land records to advanced pupils.

The question of the medium of instruction has never been a troublesome one, primary education being almost always synonymous with vernacular education even in the primary standards attached to the secondary schools. The point at which instruction in English is begun varies from Province to Province, according as the lower primary has or has not infant standards and four or six standards besides; but practical uniformity exists in that the use of English as a medium of instruction (except in the case of east Bengal) always begins after the completion of the middle standards.

In Burma the largest educational increase recorded in India was shown, primary schools for boys increasing by 42 per cent and pupils in attendance upon them by 38 per cent for the five years up to June, 1917. A large part of this was due to the satisfactory settlement of the peculiar problem presented by primary education in this Province, namely, the assimilation of Buddhist monastic schools in the educational system, and the marked improvement of their teaching staff. These monastic schools are the most vigorous feature still left of the original educational system which prevailed before British occupation; and, forming as they do the principal means for the moral instruction of the youth, they can not be ignored. Indeed so influential were they locally that only by their maintenance and strengthening could the moral and political welfare of Burma be subserved. A satisfactory arrangement was made, the Government taking over the responsibility of financial support, appointing deputy inspectors, and in general bringing increasing numbers of these schools under the educational control of the Department of Public Instruction. The schools of Burma also must be credited with the only far-reaching change made in India during the five years under consideration. This was the introduction of a special course for boys who did not proceed beyond the fourth grade. No reports of the success of this experiment are available, but they are awaited with great interest by all students of Indian education as dealing with a problem whose solution will be of inestimable value. During the year 1917–18 officials of Burmese education, with the consent of the Government, effected important changes in the curricula for Anglo-vernacular schools.

The chief effect of these changes was to prescribe a modified and uniform course in geography for these schools; to simplify the course in arithmetic for girls so as to leave more time for domestic economy and needlework, now compulsory; to separate hygiene from elementary science, making it compulsory for boys and girls in the primary and middle schools but optional in high schools, to amplify the courses in elementary science and object lessons, and to add morals and civics as a new subject in primary and middle schools. Arrangements were made for the preparation of a new series of textbooks in the above subjects as well as in geography.

To Burma also must be given the credit of effecting the most important administrative change of the five years, namely, the creation of a system of divisional boards to undertake, under the general control of the Educational Department, the administration of certain branches of vernacular education. The methods of handling of educational finances were also so simplified when these boards were created as to call to popular attention their increased responsibility for vernacular education. A conference held in 1916, participated in by representatives of native as well as British education, cordially accepted the arrangement, and divisional boards now have charge of all matters affecting vernacular education, subject only to the veto of the Department of Education.

With the stirring of ideas looking toward larger popular powers both in government and in education, and with the demands for compulsory education, intangible in most places and yet culminating in the Bengal act, there has been realized more thoroughly the inefficiency of the system of education as regards reaching the vast unlettered population of India. The demand for mass education, scarcely heard 10 years ago, has now so grown in volume as to fill the journals and public press, and to occupy a large part of the attention of provincial legislative assemblies. It has also significantly written itself on the mind of the governing Englishman, as is shown most conclusively by the Montagu-Chelmsford Report to Parliament, and on Indian soil proper by the circular letter addressed in 1917 to the local governments by the Imperial Government.

Grasping this demand in all its causes and implications, the educational officials of India do not hesitate to accept it as largely justified, and to use it as a powerful lever in their efforts toward thoroughgoing reform. In summarizing the general lines of progress made during the five years from 1912 to 1917, undeniable on the spiritual as well as the material sides, Dr. Sharp, educational commissioner of the Indian Empire, well sets forth what must continue to be the weakness in primary education in India so long as the masses are unreached:

> But it is impossible to rest content with an expansion of mass education on present lines or with a system under which a large proportion of the pupils are infants stagnating in a crèche, and the remainder glean only an acquaintance with the three R's, and only a small residue continue to the stage where some of the fruits of this initial labor can be reaped. Given sufficient funds and sufficient schools, education could probably be made universal on a compulsory or on a voluntary basis within a comparatively short time; but it would be an education which in many cases ended almost with the cradle and left 39 per cent of its recipients totally illiterate a few years after its cessation. This is the real crux of the problem. At the moment that a boy reaches a stage of reasonable intelligence he also becomes a useful economic asset, and even if he has not at once to begin labor in the field or factory, the utility of further study ceases to be apparent. To overcome this attitude we must look partly to better teaching, possibly to the addition of vocational classes, but mainly to the economic changes which are slowly permeating the country—agricultural progress, cooperative movements, and the growth of industries * * * . It is on economic progress that the future rests. We can not expect to see in India a literate and intelligent proletariat until that progress has permitted the provision of the necessary funds for more schools and more efficient schools and brought about the necessary change in the attitude of the people.

An interesting phase of primary education for native children is seen in that provided since 1916 by the Government for the children, and more especially the orphans of Indians serving the Empire in the Great War. Liberal grants have been made to the provincial school officials for aid to such children studying in the primary schools and also for the purpose of establishing new schools along modern lines in localities where needed. A striking feature is that all such provisions are applicable to girls as well as boys. Any child whose father is certified to have been slain or incapacitated in the service is entitled to free primary education with graduated allowance or to free scholarship in any middle school or to compete for scholarships in higher education. The Madras presidency led the way early in the war in exempting the children of actual combatants in the service from payment of all fees in the elementary schools. The amount presented by the women of India as a silver wedding gift to the Queen-Empress has at her request been devoted to the education of the children of fallen Indian soldiers. The Bombay presidency was the first to establish a technical school not only for adolescent children but also for disabled Indian soldiers for instruction in the trades.

A problem unique to India is the education of backward and depressed classes, such as the aboriginal, and hill and forest tribes, the classes subject to caste discrimination and neglect, the criminal tribes, and the communities, religious and racial, which present special problems. Naturally these classes vary so vastly from Province to

Province, and even within the same Province, in the causes underlying their condition and their needs, and in the methods to be used in their instruction, that no general rule can be laid down. The directors of public instruction are uniformly alive to the appeal made by these classes, educationally and socially, and a growing determination to minister adequately to them is manifest in the last reports of education in India. In this work the aid of the mission agencies has been invaluable. By years of patient toil they win the confidence of these classes, learn their tongue, found schools, and reduce to writing languages which have never been written.

Even more pathetic is the condition of the depressed classes, for they suffer more acutely from the immemorial tyranny of the caste system. As is evident, this question is complicated by many of the most subtly difficult phases of Indian social life. Here again Government schools must be supplemented by missionaries, both Christian and native; but throughout there must be taken into account the difficulty of securing as teachers natives of the better caste. Work among the criminal tribes, which only a generation ago were a terror in most of the Provinces of India, has been steadily pursued. An interesting fact is that the most successful agency for dealing with such tribes is the Salvation Army, which has established settlements remote from civilization and is imparting systematic industrial and moral training. Unequally applied, but of general use in the education of these classes, are such measures as special inspection under the auspices of the Government, scholarships and fee exemptions, a special system of hostels under moral control, instruction in industries and in weaving, carpentry, and silk culture.

The subject of the teachers upon whom primary vernacular education devolves is necessarily a most important one. The salaries, as all the directors freely admit, are inadequate, though what is deemed some improvement has taken place during the five years under consideration. In the representative Provinces of Madras, Bombay, Bengal, and the Punjab, the average salary is, respectively, 10,[1] 28, 7.5, and 12 rupees. In Burma it is the highest in the Empire, being 40 rupees per month. The dire necessity of supplementing salaries in various ways is a significant commentary upon the real situation. Teachers in many places are granted very precarious fees; again, they serve as branch postmasters, an arrangement long criticized, but still continued by the authorities; and in the more remote settlements they eke out their salaries by having charge of the cattle pounds, sanitation, and registration of cattle in the district. As the directors recognize in their reports, the raising of the standard of teachers and their place in the public estimation can only come from increase of salaries.

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[1] The rupee is estimated to be worth about 32 cents.

SECONDARY EDUCATION.

The division of secondary education into the vernacular and the Anglo-vernacular shows the extent of the departure from the uniform character of primary education. As regards the grading in this division, it includes the middle standard, whose exclusive purpose is to prepare boys for the high stage; and the high standard, leading directly to the colleges or technical school.

The middle standard is, except in the Central Provinces, entirely vernacular, though in most of the Provinces the study of English on the literary side is begun with the middle courses. A complicating element is also found in the fact that the middle standard usually has attached to it the upper primary classes. Indeed, this is the case everywhere except in Bombay and the Central Provinces. The middle vernacular schools constitute the type usually found in the rural districts; but there is increasing complaint that boys of talent and even high caste, whose only opportunity such a school is, upon its completion can not easily, if at all, be transferred to an English school.

In the few cases where such a transfer can be effected such a boy finds himself without the necessary training in English.

This problem has been clearly seen by most of the directors of public instruction. To take a representative Province, in Madras the attempt was made to draw a sharp distinction between secondary and elementary education. It was hoped that this would compel promising native boys to begin the study of English earlier in the vernacular school; but the attempt was found impractical, and the director reports that further means will have to be sought for properly grounding native boys who may be destined for a professional or public career, and for protecting the secondary schools from a large influx of ill-prepared boys from the elementary schools.

The high standard, which offers instruction ranging from one to three years, is conducted solely through the medium of English, and prepares directly for college and technical school. Its curriculum is modeled closely upon that of the classical public schools of England, such as Eton and Rugby. It naturally appeals almost exclusively to the boys of Europeans, and the few native Indian boys, destined to governmental employment, who have enjoyed unusual advantages of early training from tutors in English and classics.

The "top-heaviness" characteristic of the system of education in India is clearly illustrated in the secondary field. As this division is practically restricted to boys, the comparison must be instituted with the number of boys in the primary. This, in 1917, was 5,614,633, being 4.5 per cent of the total male population. In secondary education, the total enrollment for the same year was approximately

1,250,000, being 1 per cent of the total male population, and an even more striking increase of 28.3 per cent for the quinquennium under consideration. Here is met the most significant feature in Indian education, the numerical increase in secondary education. This varies from Province to Province, Bengal marking the highest percentage, having 35.8 of all the secondary schools, and 35 per cent of all the secondary pupils in India. But the phenomenon is marked in them all. If Bengal may be taken as representative, the director finds the following reasons for so extraordinary a popularity:

1. The partition of Bengal into two governmental districts with more effective administrative and financial handling.
2. The fostering of education by the Government, especially among the Mohammedans, a people traditionally inclined to education.
3. The prevailing high mark of prosperity, with the consequent ambition of the middle class to advance their children by means of secondary education into professional careers and governmental civil service.

With this phenomenal increase in secondary education, however, it was not to be expected that there should be a corresponding improvement in the extent to which it answers the needs of the native population, though in every Province earnest attempts have been made to make it do so. The provincial governments have everywhere recognized their responsibility to provide facilities at the larger centers, and have striven to relieve local bodies of the increased expenses of secondary education, to leave local funds free for use in elementary instruction, and above all to improve the salaries and living conditions of teachers. But after all has been done, it is still recognized that the crowding of ill-prepared native students into secondary schools, the inevitable corollary of the inertia of the primary schools remains an evil which disastrously affects the whole system.

In 1916, the Government of India submitted an exhaustive scheme for the approval of the several Provinces, whose main features were the reorganization of the service to which the graduates of high schools might aspire, the opening of additional high schools, the systematic financing of middle English schools by the Government, and a thorough overhauling of schedules and programs of studies. Another suggestion has been that the provincial government prescribe a maximum limit of, say, 40 pupils for high-school classes or sections; Madras and Bombay have already adopted such a limit, but the problem still remains unaffected by such palliative measures. It has been thought that the trouble lies with the impractical and too literary nature of the curricula; and therefore in the advanced

Provinces, such as Bombay and Madras, science, drawing, and manual arts have been made compulsory in many high schools, and others such as history and geography have been articulated with the life of the students.

In short, while the officials think that solid improvement has taken place in the spirit of secondary education and in the sincere desire for reform, yet the standard of secondary education is still discouragingly low because of inadequate staff and poor pay of teachers, overcrowding and defective discipline. As the educational commissioner reports:

> The apparently inexhaustible demand for secondary education, combined with the difficulty of meeting it in an adequate manner, tends to swamp the effects of reform. Existing schools are improved, but new ones spring up, lowering the average of attainment, and undermining discipline.

According to official reports of the year 1918, the general condition of secondary education throughout India at large had shown little improvement for several years preceding; but that year marked the introduction, in several Provinces, of important changes in the system of examinations in secondary schools. Details differ from Province to Province; but the common tendency has been to abolish the old blanket permit of college or university matriculation, and to stiffen up the examination or leaving certificate required by the individual secondary school. Examination upon a minimum of certain specified subjects is required. This move is interesting as running counter to the trend of modern secondary educational thought, which, certainly in the west, is setting ever more steadily toward easier articulation between the secondary school and the higher institution, and toward less emphasis upon examinations pure and simple. In India, however, it is only fair to point out the abuses which developed under the old system of easy matriculation, which was perhaps chiefly responsible for the swollen enrollment of the higher institutions with their masses of ill-prepared students.

A material feature of secondary education in India must not be passed over without notice. This is the institution of the so-called "hostel," by which is meant the boarding hall under the direct supervision of the school, with varying arrangements as to mess halls, and presided over by either the school head or one of the older assistants. As a large number of native boys do not live in close proximity to schools of secondary grade, and must attend such schools more or less distant, the importance of the hostel in their school life can not be overrated. The hostels naturally vary extremely in their character and in the habits of regularity, method, orderliness, and cleanliness which they inculcate. The negligent and even criminal conditions, with insanitary lodgings and exposure to temptations, which have been discovered in many instances, have aroused directors and students of education to the duty of the State to see that so large a proportion of the school population shall live in a wholesome environment. Under compelling circumstances as they exist at present, it is recognized that the hostel system can not be done away with, but must be accepted, improved, and even extended. The Province of Madras in particular (where one boy in every five in secondary schools lives away from home) has grappled with the situation by a systematic study of the character and conditions of the hostels within its borders.

COLLEGES AND UNIVERSITIES.

The Indian colleges are divided into those which offer a general education and do not especially prepare candidates for any profession, and those which do prepare students for the professions. The former class fall usually under the head of colleges of arts and general science, themselves being subdivided into English and oriental colleges, with the latter of which we are not here concerned. The arts colleges, which train students by the medium of the English language in the usual subjects, are divided into first and second grade colleges. The latter, approaching in character and purposes the American junior college, do not confer a degree. The first-grade college graduates the students in all academic degrees and even offers a full graduate course.

While the colleges do not vary essentially in organization from Province to Province, they do vary decidedly in historical development, in number, in location, and in efficiency. Madras represents one extreme in the considerable number of scattered colleges, and of the second-grade and mission colleges; while Bombay and the Punjab represent the other extreme, that of the so-called "intensive development," grouping all eight of her colleges in three great centers. Following the English model, the colleges of all Provinces are closely affiliated to the universities, their courses and examinations, and even internal regulation and inspection, being prescribed directly by the universities. In certain Provinces, as in the case of Bengal, the university has power to annul the action of the college authorities in the matter of students' appeals from decisions and in the arrangement and conduct of hostels and mess rooms.

Among the pressing problems connected with the methods and the success of college instruction, the chief perhaps arises from the fact that the staff is usually ineffective in number for the great size of the classes under its charge. This complaint is voiced in most of the reports of the provincial directors. The situation is but another symptom of the "top-heaviness" already dwelt upon. In 1917 the colleges numbered 134, and showed an enrollment of 47,000 students, both native and European; registering a percentage of four-hundredths of one per cent of the total male population, and an increase of 60 per cent since 1912.

Within the past five years the question of the exclusive use of English as the medium of instruction in the colleges has come to the front, after having lain dormant since the early thirties, when Lord Macaulay's famous minute convinced the Government of India of the necessity of English as the only means of instruction. The Province of Bengal has led the way in declaring for bilingual instruction in the courses of its colleges, the other language being Bengali. This decision was arrived at after mature consideration of the claims of all languages spoken in the Province and the establishment of the fact that a considerably larger proportion of students use Bengali as their native tongue than any other. This decision, furthermore, does not affect the subject or content of courses offered nor relieve the student from satisfying the requirements in English literature and composition both at entrance and in course.

The tutorial system of studies, favored by most directors, under the direct influence of the English system, is profoundly and adversely affected by conditions varying with financial inability, with individual numbers of students, and with attainments of the tutors themselves. The tutorial system is most firmly established in the colleges of the Punjab; elsewhere it has at best a precarious footing.

As regards the conditions under which the students live, the hostel system which has been considered in secondary education plays also a large part in the colleges. Because of the maturity of college students as compared with those in the middle and high schools, the system is regarded as most successful in the colleges. The director of public instruction in Bengal thus summarizes the place of the hostel:

> Some parents whose sons could attend from home are said to prefer their residence in hostels because of the good influence which it exercises. Other means are used to promote corporate life and common interest. In Calcutta (where residential arrangements are defective) the colleges of the university acquired a fine building for social gatherings of students and their elders. In the well-managed colleges throughout India there is now an esprit de corps and a vigor of life which contrasts refreshingly with the languidly laborious existence which less favorably situated students still endure. Athletics, literary, debating, and scientific societies, and the production of magazines are usual features of college life, taking to some extent the place of general reading, which has not the same attraction for Indian as for English youths.

The five universities of India—those of Calcutta, Bombay, Madras, the Punjab, and Allahabad—were founded within the first 30 years of British rule, and until five years ago were considered as meeting all demands for the country. Their constitutions are modeled largely upon those of the English universities: They are governed by a chancellor (the Viceroy or the governor of the Province), a vice chancellor, a senate diversely made up but along the lines laid down at Oxford and Cambridge, faculties and boards of studies, and finally a syndicate in whom are vested extraordinary powers of appeal and review. With the enormous increase in secondary education, the five years under review saw the awakening of a need for additional universities of various kinds. The Hindu university at Benares and the university at Patna opened their doors in October, 1917; the university of Mysore, under legislative incorporation of the Province, in July, 1917. The Indian university for women, a private institution, with scattered branches whose administrative center is at Poona, was founded in 1917.

The constitution and aims of the first mentioned are significant. It is frankly denominational, admitting persons of all classes, castes, and creeds, but imparting religious instruction in the Hindu tenets. It is sustained by large private and popular contributions, and begins on a more independent plane than any other hitherto known. The posts of chancellor and vice chancellor will be filled by the governing body. It is not—as are most of the other universities—an affiliating body controlling colleges scattered over a vast area, but its jurisdiction is limited to Benares and such colleges as may be established there. Important innovations are made in the constitution and functions of the several bodies which govern it, of which the main features are that administration is vested in a court composed of donors and persons chosen by various bodies, and that all academic control is vested in a senate consisting not necessarily of teachers in the university but of outsiders elected by the senate itself.

Of the schemes pending for the establishment of additional universities, most important is that for a university in Burma. This has grown steadily in popular interest during the five years under consideration, and plans are ripe for fruition within the next two years.

That a new conception of the purposes of higher educational training is permeating those in charge of Indian affairs is evident from the summary of college and university education in India given by Dr. Sharp, educational commissioner, in his seventh quinquennial review (1912–17):

> Thus two lines of development are running side by side. The old universities continue mainly, as they were in the past affiliating institutions. * * * Meantime, new universities are springing into life—some, replicas of the old, but with smaller areas and with an endeavor at partial concentration around the university sight; others completely centralized and primarily teaching institutions. It is recognized that university problems in India are of a far-reaching nature, and that the best professional advice is requisite at the present juncture. * * * His excellency Lord Chelmsford, in addressing the recipients of degrees at Calcutta said: "Only the other day I asked a

law student why he was taking up law, with all its risks and disappointments. He answered, What else is there for me to take up? I am not going to discuss his answer, but this I will say, it is my sincere hope, and it is the policy of my Government, to endeavor by all means in our power to open up other avenues of employment. So long as students think that the only avenues of employment are in the legal and clerical professions, so long shall we get congestion and overcrowding in those professions, with consequent discouragement, disappointment, and discontent. Our policy then is first to secure that there shall be as many opportunities of a livelihood opened to the educated classes and next to endeavor to divert the students into channels other than those of law and Government clerical employ."

TECHNICAL, INDUSTRIAL, AND AGRICULTURAL EDUCATION.

The recognition of the vast economic and social value of practical lines of education in India has been seen in the Montagu-Chelmsford Report. It is also everywhere emphasized in the reports of the directors of public instruction for the several Provinces. A significant trend is also showing itself in the action of the local governments in depending more and more upon advisory committees whose duty it is to study the needs of the individual Province, peculiarly with reference to technical and industrial education, and to give expert advice both in management and in general policy. The adaptation of modern education to a country like India, for ages immovable in her social and educational ideas, is necessarily most complicated.

Perhaps the outstanding feature to be recorded of the five years under consideration is the work of a committee representing the Provinces at large upon the education of civil engineers. This committee considered carefully such questions as a low age limit for students entering engineering schools, requirements for admission to such, minimum knowledge of English necessary, articulation with Government colleges, in short all the problems confronting the development of an increasing body of native students of engineering.

It is agreed that only in the development of such a native body, both in engineering and allied lines of practical training, can means be found to stem the flow of young Hindus into the law and Government service.

The urgent need of industrial education began to make itself felt about 15 years ago, when a committee appointed by Lord Curzon suggested an apprentice system maintained by the State. In addition, the Imperial Government encouraged the establishment by the local governments of trade schools of various grades. The next 10 years saw many schemes, some fanciful, most too costly, and others still impracticable, put into operation. In Madras and Bengal especially the schemes for industrial education in weaving, dyeing, mechanical engineering, and plumbing were most practical and fruitful. It is interesting to note that the scheme for the State training of apprentices was dropped, but led to the establishment of Government trade schools, where continuation classes are provided for youths still in the employ of various firms, an interesting anticipation of provisions in the Fisher Act. On the whole, however, industrial education in India has hitherto attained only a limited measure of success. The causes, racial and governmental, lie deep below the surface; but that the situation is capable of improvement and that it is improving is emphasized by the directors of the advanced Provinces.

The sign of greatest promise is the existence of the Indian Industrial Commission, with its encouragement of practical instruction in manual arts and domestic science in the common primary and elementary schools. The report of this commission, presented early in 1919, makes the radical recommendation that the general control of noncollegiate industrial and technical education should be transferred to the Department of Industries, though the cooperation of the Education Department can not be dispensed with. The commission feels that an education purporting to train for industrial life must have direct organic connection with industries and industrial employers; that teachers and inspectors should be trained by the Industries Department not merely for independent schools but also for industrial and technical apprentice classes annexed to commercial plants.

The Government of India has never lost sight of the supreme importance of agricultural education in India. This is one subject that is free from complications, inasmuch as its two fundamental objects—the improvement of agricultural methods and the betterment of the material and economic conditions of the vast mass of the people of India—confront all students of the subject on the threshold.

To devise ways to reach influential classes, such as the landed and more prosperous cultivating class, a number of conferences participated in by students of general education as well as of agriculture have been held. Chief of these was that held in Simla in June, 1917, at which were represented all the Provinces of the Empire. It recommended the foundation of agricultural middle schools, the specific training of teachers for such schools, the adaptation of primary education to rural needs, the establishment of an agricultural college in each of the principal Provinces of India, and the more general diffusion of agricultural knowledge among the mass of the people by the demonstration of improved methods and by instruction brought to the illiterate tiller of the soil.

Most of the agricultural colleges in existence report a grave lack of interest among the people, as evinced by the small number of students generally attending and by the even more serious lack of demand for specially trained men on the part of the landholders and agents of large tracts. Attempts have been made to increase interest in individual colleges by reducing the length of course and by offering practical courses rather than those upon scientific subjects. Most of the so-called agricultural colleges, according to reports, are very little more than secondary schools.

THE EDUCATION OF GIRLS.

With the stirring of reform movements in Government, and the proposal to extend suffrage to women, the education of women in India has become within the five years under consideration a burning question, such as was never anticipated it would be. Speaking generally, little provision is made in the governmental schools of India, vernacular or Anglo-vernacular, for the education of girls. They are educated mainly in special schools, which are generally private except in districts where, as in the Central Provinces, the Government has taken over control. Only in Burma, where extremely early marriage does not prevail, are the schools mixed.

The subject is, like so many others, complicated by innumerable traditions and social limitations. According to the inspectresses of various districts, difficulty is experienced in securing Indian ladies of position to work upon local committees, in attracting women of proper character, attainments, and caste to work as teachers, in securing regular attendance, in inducing girls to remain in school for a reasonable length of time, and back of all in combating and overcoming the age-old hostility to educating women at all. Despite these social as well as educational difficulties, however, the great increase of 29.2 per cent is to be recorded for the past five years in the total number of native girls under instruction in India. This for 1916–17 reached the surprising total of nearly 1,300,000 girls. More important than the increase in numbers is the change which is being wrought in the attitude of the public, a change which applies not only to the essentials of primary education, but also to secondary schools. Authorities agree that:

> Indian public opinion has slowly changed from its former attitude of positive dislike to the education of women and is now much more favorable as regards every community. * * * Professional men now wish to marry their sons to educated girls who can be in a real sense companions and helpmates; therefore education is beginning to be valued by parents as improving the marriage prospects of their daughters.

A large part of the credit for the advance of female education is due to the fact that the quality of teaching in schools for girls is better than in those for boys. This is especially pronounced in secondary schools, both those under mission management and those, as in the Central Provinces, maintained by the Government. Again, modern courses in industrial and vocational subjects have been introduced in many girls' schools, and increased attention has been paid to physical training. Here immediate results of modern diet and training have been most pronounced.

Another interesting phase of women's education well shows how closely related are social and educational considerations in India. The institution of extremely early marriage, and its concomitant of a large number of child widows in the great Brahman States of Madras, Bombay, and Bengal, have led school authorities to take measures for the education of that element of the population which has hitherto been neglected and led a sad and useless life. For the most part such Brahman child widows are distinctly intelligent and their training as teachers, especially for secondary schools, has been attended with marked success. The school authorities see in this a powerful incentive toward the popularizing of secondary education amongst the Hindu people.

A word should be said as to the encroachment of English education for girls upon the vernacular education. From all reports, the appreciation of English education is growing, largely because in the public mind English influences are held responsible for the existence of any education for women at all. Some authorities see the future of girls' education as lying in a judicious extension of the middle English schools, whose graduates should furnish a nucleus of educated opinion as well as a trained corps of teachers. The director of public instruction for Bengal vigorously summarizes the situation :

> We may at least hope that in dealing with the education of girls, we shall not repeat the mistakes which have been made in the education of boys. There will be no excuse if we do, for the girls of Bengal with comparatively few exceptions do not have to be trained to scramble in the open market for a living * * * For many years yet secondary and higher education will be confined to the few. Is it too much to hope that we shall be able so to order things that the education given will be a reality? There is only one way of accomplishing this, and that is by securing cultured and sympathetic women to work as inspectresses and in colleges and schools and by giving these women as free a hand a possible. If we determine to do this and do not shrink from the bill—it will not be an unlimited liability—we shall be giving Indian women a chance.

EDUCATION OF MOHAMMEDANS.

The discussion of Indian education, as has been seen, centers, predominantly around that of the native population. Up to this point general lines have been laid down which include all races and creeds without discrimination. But there is an element of the native population so distinct and so tenacious of creed and customs that special mention must be made of it. This is the Mohammedan population of British India, which comprises (1917) 58,000,000 souls, or slightly less than one-fourth of the total. It is the only racial group whose adjustment to the uniform educational system of the country once seemed fraught with grave difficulties. But time has brought tact and understanding to the authorities in their dealings with the Mohamedans. Racial and religious barriers have been so broken down that in the Provinces showing the highest Mohamedan population—Bengal, the Punjab, the Northwest Frontier Province, and in some of the native administrations under British protection—the Mohammedans had proportionately a larger number of children in the lowest vernacular schools recognized by the Government than any other race.

But there are certain difficulties still inherent in the situation. The Mohammedan religious authorities require the child to attend the Mosque before he does any other. This results in the Mohammedan boy's commencing his regular schooling at a later age than the average. The alien languages to be learned, and the poverty of large sections of Mohammedan communities (where many converts are from the depressed classes) have worked to reduce the numbers in the higher standards of the primary vernacular schools materially, to say nothing of those in the institutions of higher education.

A further important element in the situation is the small number of Mohammedans engaged as teachers in the Government system. This is, among others, a result of the strict religious obligations laid by purely Mohammedan education upon its graduates to remain faithful to Islamic teachings. Thus conditions for both teachers and pupils of Mohammedan faith are not favorable to the development of confidence in the Government schools. In Bengal the authorities have steadily endeavored to develop such confidence by special concessions to Mohammedans and the assignment of a large proportion of official posts to be filled by them.

None of the measures indicated, however, has been recognized as adequately meeting the situation, and the authorities have repeatedly authorized the Mohammedans to start their own schools under their own committees, with full facilities for religious instruction and observance. Such schools are: (1) Those which teach the ordinary course of elementary subjects; (2) those which started as native schools but have modified the prescribed curriculum; and (3) those which are indifferent to government recognition and have their own scheme of studies. The number of Mohammedan schools necessarily varies widely from Province to Province, secondary schools being specially well developed among them. In Bengal especially there is the unique combination of what are really middle

English schools with separate departments using Arabic as a medium of instruction and teaching Arabic literature.

Three colleges are maintained by the Mohammedans, which mark a distinct advance in the reconciliation of the turbulent quarrels of the frontier tribes, many students being drawn from the non-Mohammedan population. There is an increasing demand for college education among the Mohammedans in Bengal, and the next few years bid fair to see additional colleges initiated to meet this demand.

To sum up the situation: The English educational officials are much encouraged by the marked increase in the number of Mohammedans resorting to the schools giving instruction along modern lines. Indeed, the number of Mohammedan pupils has steadily grown to be larger in proportion to the number of this group than those of all races and creeds together. The increase of Mohammedan pupils in the Government schools is a convincing proof that even among this stubborn group—

> the old prejudice against modern forms of thought and exclusive adherence to the orthodox subjects are dying away. Views are broadening. It is seen that instruction in special schools is often inferior—if only because the staff is inferior. * * * The special school that teaches unnecessary or useless subjects is waning in popularity. The cry is still for special institutions, but of the type that will fit the Musselman for the developments of modern life while yet keeping him a Musselman.

EDUCATION OF EUROPEANS IN INDIA.

While the study of Indian education primarily concerns itself with instruction imparted to native children, who comprise the overwhelming majority of all school children throughout the Indian Empire, yet the education of the children and youth of European descent should not be overlooked. In the nature of things a different background of tradition and inheritance is possessed by the European, and his children, no matter how humble or to what employment destined, have essentially another outlook on life from that of the native, and in most instances children of European descent, whether pure or mixed, retain European habits and modes of life. As late as the close of the past century social distinction brought about the result that children of English officials were sent to England in early infancy, there to be educated, or in the more healthful hill Provinces special schools were privately organized and maintained for them. At the same time the children of the poorer Europeans and those of mixed blood were left to be educated largely by charity and in schools especially founded by private and religious benefactions.

Of recent years not only has the European population of the leading Provinces of India increased exceedingly with the development of commerce and industries, but it has come to be recognized as the moral duty of an enlightened State to assume the instruction of all children whose domestic circumstances can not afford them adequate schooling. The original character of the schools for European children has, however, remained, and even where governmental grants are assigned it is usually to schools founded and managed on religious and denominational lines. In return for the grant of aid the Government does not always require a share in the management. The case of Bengal may be taken as representative. Out of 79 institutions for the training of European children only 5 are managed by the Government; 15 are undenominational, most of them being schools maintained by the industrial corporations for the children of their employees; the remainder, 59, belong to various religious bodies. This denominational character, although the powerful factor in the existence of such schools, has come to be regarded as leading to some waste of effort, and the Government has begun to encourage the consolidation of such schools wherever local conditions make it possible. Such schools are visited by a special inspector in each of the larger Provinces, but beyond good sanitary and health conditions no very rigid requirements are exacted.

In Provinces and districts where denominational and private schools have not been founded the Government has addressed itself seriously to the long-neglected question of the education of Europeans. Since the historic conference on this branch of education held at Simla in 1912, presided over by the governor of the Punjab, and including representatives of the various interests of European life in India, interest has steadily grown. The system of compulsory education, of which the conference declared itself in favor, met surprising opposition from the local governments, the claim being made that the voluntary system of attendance was found to be working effectively. This, however, has been questioned by social workers in the large cities. Especially in the city of Madras the imperial grant of 30,000 rupees for the extension of education among the poorer classes was gratefully welcomed in consideration of the undeniably large number of European children not reached.

Separate European education naturally enrolls the overwhelming majority of its pupils in the primary stages. Embracing the middle school, 9, 10, and, in a few instances, 11 grades are offered, the subjects being practically the same as those taught in corresponding European schools. An interesting feature is that the second language required may be either Latin or a modern European language or an Indian vernacular. In regard to high-school work, the conference above referred to recommended for the high schools for boys a more modern and practical curriculum with a few schools which should prepare boys for the universities and the professions and be called collegiate schools. The latter clause, however, owing to the disagreement of local governments and the Imperial Government of India, which thought the need amply met by practical training, was not put into execution.[1] As a matter of fact the peculiar defect of European governmental education in India is that it makes scant provision for continuing the education of promising boys. A few endeavor to go to England, and those unable to do this are admitted to the colleges for Indians, where they enjoy all advantages. Most of the directors report satisfactory progress in the European schools in their Provinces, and interest in this field is shown by the proposal for a training college for teachers in southern India. Methods and instruction are reported as still improving, in spite of the losses of many teachers to military service.

TRAINING OF TEACHERS.

The broad distinction between the English and the vernacular schools is also carried out in the classification of teachers. Teachers trained in the English schools serve in secondary schools exclusively; teachers trained in the vernacular institutions serve almost exclusively in primary schools but to some extent also in secondary schools. The former class are trained according to English methods in the 15 special colleges and call for no further notice. The latter are of great importance in the system of Indian education, but their training lacks much of being what it should be. The Government of India has always been alive to the necessity of having a supply of teachers for primary schools adequate both in number and in attainments; but progress has been hampered in the many ways already shown in the treatment of primary education.

In August, 1916, the Government of India issued a circular letter to local governments pointing out the inadequacy of the arrangements in many Provinces for the training of teachers for secondary and primary schools, and suggesting as a minimum standard that the number of teachers to be trained in each year should not be less than the number of new teachers who must be provided to take the place of those who have died or resigned or to meet the demands created by the extension of education. Since then considerable improvements have been effected, but no improvement can be fundamental unless the teacher's profession is so elevated socially and financially as to attract an adequate number of candidates of the proper stamp. This has been attempted by increasing salaries, the effect of which has been to increase the numbers of the applicants in many Provinces, if not to elevate the quality. Of the approximately 190,000 teachers of the vernacular, barely 60,000 are trained.

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[1] It is interesting to record that this problem was attempted in Madras, where a very progressive schedule of studies, allowing three alternative courses, has been introduced in the middle schools. The first was for pupils who did not intend to pursue their education; the second prepared for the high school with studies leading to college and university; and the third prepared for business. Madras also has the credit of being the first to provide especial vocational and domestic economy training, an example which has since been followed by some of the schools in Bombay.

The magnitude of the problem is serious. If the wastage of teachers of the vernacular be estimated at 6 per cent each year, the training institutions should turn out 12,000 teachers a year. But in 1917 the number turned out was only a little below 9,000. Thus the normal supply is not maintained, to say nothing of the increase necessary for extension.

Students enrolled in the higher vernacular training institutions are required to have completed the middle course in the vernacular or Anglo-vernacular schools, and upon graduation they are certificated to be teachers in secondary vernacular schools or to be headmasters of primary schools. These are the distinctive normal schools, their training extending over periods of from one to three years according to the Province concerned. Schools of a lower type are attended by students who have completed only the upper primary grades, and they offer shorter courses for the training of ordinary teachers in primary schools.

It is the improvement in the students frequenting this latter class of schools that is the task of supreme importance in the training of teachers. The several Provinces differ in the attention bestowed upon the one or the other of the two lines of teacher training, and in the content and thoroughness of the courses offered. The problem of improvement has been most seriously attacked in the Province of Madras, where, as the report shows, modern methods are much needed:

> As regards the methods followed in the training schools, criticism and model lessons are generally suitably conducted. A weaker point in the training is the work in the practicing section. With the existing numbers it is difficult to give the students sufficient practical work, nor does it appear to be sufficiently recognized that the practical work done must be thoroughly supervised, scrutinized, and discussed with the students. The teaching of the subjects of general education is variously reported upon. With their better staffs, the Government schools are better than the aided. Nature study seems to be the weakest subject and garden work poor. * * * Criticisms are also heard of the teaching of geography and the vernacular. On the whole, however, real progress appears to have been made.

GENERAL CONCLUSION.

In conclusion, the note of encouragement and optimism voiced in the reports of the several directors of public instruction seems justified, and a net result of progress during the quinquennium is to be recorded despite the retrogression in certain districts and in certain branches of education which are inseparable from the economic and other effects of the war. As Dr. Sharp summarizes the situation in his concluding paragraph upon the general progress of education in India:

> There is no denying the fact that while public interest in education has increased, public opinion so far as it is expressed often remains crude and unformed. Press utterances are frequently actuated by vested interests or political motives. The criticism of measures of reform is attractive and the student community is a valuable political asset. * * * There is a tendency to lower standards and to oppose their improvement. Publicists support pupils in acts of indiscipline, openly blaming the teachers and deprecating punishment. * * * Below these manifestations there is a great body of sound public opinion. Nor is it always inarticulate. An important section of the press has, during the quinquennium, approached educational questions in the spirit of the educator. This is a hopeful sign. But before a thoroughly sound advance can be made it is essential that educational questions should be regarded on their own merits, that the teacher should come into his own and that due values should be set upon the respective merits of knowledge and of understanding.

EDUCATION IN EGYPT.[1]

Egypt was declared a British protectorate on December 18, 1914. The ruler under the title of sultan, formerly khedive, and the Council of Ministers form the government. The authority of Great Britain is vested in the British Resident, the British advisers of each ministry, and inspectors of the various departments in the 14 Provinces. Education is controlled by the Ministry of Education or the central authority and the councils, or the local authority for education. No close cooperation exists between these two kinds of bodies. The majority of the population is illiterate. According to the 1907 census, 96 per cent were unable to read and write. At present only 3 per cent of the population are attending elementary schools. A scheme is, however, under way which aims to establish efficient schools for at least 10 per cent of the population within the next 30 years. The net expenditure of the Egyptian Government on education represents less than 2 per cent of the annual budget. This sum is intended primarily to cover the expenses of the Europeanized course of education designed to fit Egyptians for various branches of the public service and for professional careers. The education of the masses is intrusted to provincial councils or the local authorities, who make provision for elementary schools in their areas.

BUDGET.

The expenditure of the Ministry of Education for 1918–19 amounts to $2,858,941, which is an increase of $548,216 over the estimates of the preceding year, when the credits granted were lower by $186,727 than the prewar level of 1914–15.

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[1] Based upon the note of the Ministry of Education on educational organization and policy.

Education of Egypt is now clearly crystalizing into two systems: The Europeanized, which aims at providing education chiefly for the wealthier circles of society, and the vernacular, which aims at providing a practical education for the rest of the population. The Europeanized system is modern. The vernacular is old and indigenous. The primary schools form the basis of the Europeanized system.

INFANT CLASSES AND SCHOOLS.

Infant classes are at present provided in girls' primary schools only. As some knowledge of reading is required for entrance to primary schools, the ministry is making provision for the establishment of two infant schools for boys, one in Cairo and one in Alexandria.

PRIMARY SCHOOLS.

The Ministry of Education at present maintains 30 boys' primary schools, attended by 6,716 pupils. The provincial councils maintain 27 boys' primary schools, attended by 2,892 pupils, and give grants in aid to 14 private primary schools attended by 1,985 pupils. There are also 42 other private boys' primary schools, attended by 7,999 boy pupils, under the inspection of the Ministry of Education.

The girls' primary education is provided at present in three Government primary girls' schools, attended by 491 pupils. The provincial councils maintain 10 primary schools attended by 993, and give grants in aid to two other schools with an attendance of 227. There are also under the inspection of the ministry 15 private girls' schools, attended by 1,726 pupils. The Ministry of Education has thus under its control or under inspection 113 boys' primary schools attended by 19, 592 pupils and 30 girls' primary schools, attended by 3,437 pupils.

The staff in the primary schools is exclusively Egyptian, and all the instruction is given in Arabic. The curriculum comprises the ordinary elementary subjects. English is also taught. In girls' schools stress is laid on training in domestic subjects (cooking, laundry, housewifery, and home hygiene). The course in boys' schools lasts four years; in girls' schools six, the first two years constituting infant classes.

The instruction in the Government primary schools is not free, but some provision is made for necessitous children in the primary schools belonging to the provincial councils and private benevolent societies.

The primary education certificate, formerly awarded upon the completion of the primary school, qualified the pupils for appointment in the Government service. This attracted a large number of pupils who did not intend to pursue higher studies and were thus diverted from taking up a more practical course of studies. This defect was remedied in 1915 when the primary education certificate was abolished. In its stead was instituted an entrance examination for admission to secondary schools. By this reform the primary course lost its mark of self-completeness and came to be regarded as an initial stage of the Europeanized system.

THE VERNACULAR ELEMENTARY SCHOOLS.

The vernacular elementary schools, called maktabs, aim to meet the needs of the population at large. The course lasts four years, and, in addition to the ordinary elementary subjects, includes the study of the Koran and the tenets of Islam. In girls' schools stress is laid on domestic science. The standard in maktab schools is far below that maintained in the primary schools. Improvements are being introduced gradually. In the Government and in a number of other maktabs, teachers are paid fixed salaries instead of being dependent on school fees. In some places, as for instance in Alexandria, private maktabs are being bought out by a special commission and turned into municipal schools under the inspection of the ministry. At present the ministry maintains from its own budget two maktabs with 209 pupils and manages or inspects 4,263 maktabs attended by 282,063 pupils.

HIGHER ELEMENTARY SCHOOLS.

These schools aim to supplement the meager education received in the maktab schools. There are at present 16 higher elementary schools attended by 742 boys and 226 girls. These schools are supported by the Ministry of Education and the provincial council. The boys' higher elementary schools are of two types, urban and rural, with a four years' course each. The rural schools offer, in addition to the usual literary subjects, lessons in rural science and native study, mensuration and surveying, and practical work in the school garden, as well as a certain amount of manual training. The urban schools have an industrial bias. The school schedule provides among other subjects for lessons on materials, machines, and manufactures, as well as for a large amount of manual training. These schools represent a new development in Egypt. The manual training is intended to be a means of mental training. The pupils, it is claimed, show great delight in manual work, and this reacts favorably on their book work. In order to facilitate the development of this new type of schools the fees have been considerably reduced. In the girls' higher elementary schools the course is limited to three years. The instruction is practical, more than one-third of the time being devoted to domestic training (needlework, cookery, laundry work, housewifery, household accounts, and home hygiene).

SECONDARY SCHOOLS.

Secondary schools are the product of the Europeanized system. The ministry maintains at present six secondary schools and arrangements are being made to open a seventh. The schools are attended by 2,442 pupils. There are also 28 private secondary schools, attended by 4,643 pupils. In 1913 the ministry inaugurated a system of grants in aid to private secondary schools. This had a marked effect in improving the equipment and efficiency of these schools. The ministry has thus under its control or under inspection 34 secondary schools, attended by 7,085 pupils. There are at present no departmental secondary schools for girls, although the ministry is planning to create a girls' high school for the children of the well-to-do classes. The secondary course for boys extends over four years, branching out at the end of the second year into two divisions, literary and scientific. The syllabus for the first two years comprises Arabic, English, history and geography, mathmematics, elementary physics and drawing, as well as physical training. In the third and fourth years, while the teaching of Arabic and English is continued, pupils in the literary course begin the study of French and follow an extended course in history and geography, while pupils in the scientific course do not take up the study of a second foreign language but devote their time to extra work in mathematics, science, and drawing. The secondary examination is taken in two stages, Part I after the second year and Part II on the completion of the course.

INTERMEDIATE TECHNICAL SCHOOLS.

Admission to the intermediate technical schools is based on the primary course of study. The technical schools comprise the Bulak Technical School, the Intermediate School of Commerce, both in Cairo, and the Intermediate School of Agriculture at Mushtohor. The Bulak school has a four years' course of study, the school of commerce and that of agriculture only three years. The Bulak Technical School is organized in three sections—building construction, mechanical and electrical, and arts and crafts. The first two schools are under the department of technical education (a branch of the Ministry of Education); the last is under the Ministry of Agriculture.

The Ministry of Education also maintains model workshops at Bulak, Mansura, and Assiut, which are attended by 743 pupils. In addition, the provincial councils maintain 12 trades schools, attended by 1,643 boys. There are also five trades schools, attended by 531 boys and 156 girls, in the governorates. These nondepartmental trades schools receive grants in aid from the department of technical education. The Ministry of Education also maintains one domestic school and inspects two private schools. Agricultural education is provided at nine agricultural schools, attended by 473 boys. These schools receive grants in aid from the Ministry of Agriculture, which is responsible for the inspection of the schools.

ELEMENTARY TRAINING COLLEGES FOR MEN AND WOMEN.

Great progress has been made in recent years in the training of teachers, both men and women, for service in the maktabs. It was only in 1903 that the first elementary training college was established. At present, in addition to the two men's training colleges and two women's training colleges maintained by the Ministry of Education, there are in existence 13 training colleges for men and 10 for women teachers, supported by the provincial councils. The four Government colleges are attended by 196 men and 396 women. No fees are charged, and in two women's colleges the students are lodged and boarded free. The 23 provincial council colleges are attended by 1,059 men and 353 women. The Ministry of Education has thus under its control or inspection 27 elementary training colleges, attended by 1,255 men and 749 women.

The elementary training college course extends over three years. The men's colleges are at present recruited mainly direct from the maktabs, but also largely from the mosque schools; the women's colleges are recruited direct from the maktabs. At present evening classes are held in the Bulak Elementary Training College for teachers in maktabs in order to improve their competence in kindergarten methods and physical training. As the existing higher women's college does not furnish a sufficient supply of teachers for the women's elementary training colleges and for the girls' higher elementary schools, the ministry has found it necessary to provide some other source of supply. In 1917 it created a supplementary course in the Bulak Elementary Training College, 11 students remaining to be trained as teachers of general subjects and 6 as domestic science teachers. The experiment having proved satisfactory, the ministry has now developed the scheme by extending the course to a second year. A third section was added for the training of kindergarten teachers for the new infant schools and the infant classes in the girls' primary schools.

NASRIA TRAINING COLLEGE AND SCHOOL FOR CADIS.

Apart from the University of Al Azhar and the other mosque schools, the Nasria Training College and the school for Cadis form the culmination of the vernacular system.

The standard of admission to the Nasria Training College is very low. The college has now 318 students, all of whom receive their training free. The course extends over five years. Its special purpose is to train sheiks as teachers of Arabic, the Koran, and tenets of Islam for service in the primary and secondary schools.

The school for Cadis, which is under the Ministry of Justice, comprises two sections, a lower section for training clerks and a higher section for training judges, both for service in the Moslem courts. The lower course occupies four years and the higher course five years. In addition to free education, the students receive a bursary.

HIGHER COLLEGES.

The higher colleges, based on the Europeanized system, include the School of Medicine, the School of Pharmacy, the School of Engineering, and the Sultania Training College under the Ministry of Education; the School of Law, under the Ministry of Justice: and the School of Agriculture and the Veterinary School, under the Ministry of Agriculture.

The principal facts with reference to the various higher colleges are shown in the following table:

Courses and students in the higher colleges.

Higher colleges.	Length of course.	Number of students.	Higher colleges	Length of course	Number of students
School of Law	4	288	School of Agriculture (Giza)	4	120
Sultania Training College	3	273	School of Commerce	3	75
School of Engineering	4	239	Veterinary School	4	31
School of Medicine	5	237	School of Pharmacy	3	20

Admission to the higher colleges is based upon the secondary education certificate examination. For the School of Medicine and the School of Engineering the scientific secondary certificate is required, for the School of Law the literary certificate; the other colleges admit students irrespective of whether the certificate is obtained on the scientific or literary side, though in the School of Agriculture and the Veterinary School preference is given to applicants possessing the scientific certificate. English is, in the main, the medium of instruction in the higher colleges.

In the Sultania Training College there are two sections, a literary. recruited from students with the literary certificate, for the training of teachers of history, geography, translation, etc.; and a scientific. admitting students with the scientific certificate, for the training of teachers of mathematics and science. These colleges admit boys only.

THE SANIA TRAINING COLLEGE FOR GIRLS.

This college forms an important phase in the development of female education in Egypt. It is this college that is to supply women teachers not only for the girls' primary schools but also for the women's elementary training colleges and the girls' higher elementary schools. The regulations provide for a four years' course. The Sania Training College at present contains 91 students, as compared with 77 in 1917 and 4 in 1900, when the college was founded. All the students are boarders, and no fees are charged. The standard of admission is low, but this will be remedied when a girls' high school, which the ministry intends to open, comes into existence.

A number of graduates of the higher colleges are sent to Europe for further studies. At present the Ministry of Education maintains 33 such students, all of whom study in England.

EDUCATION OF JEWS IN PALESTINE.

By THERESA BACH,

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GENERAL DEVELOPMENT.

The recent revival of Hebrew education in Palestine culminated in the laying of the corner stone of the future Hebrew University in Jerusalem. It was the outgrowth of the Jewish national movement known under the name of Zionism. During the past few decades, and particularly during the years immediately preceding the war, a great revival of the Jewish spirit took place among the Jews in all the countries of the world. This is true particularly of Palestine, where the Jewish life began to shape itself along national lines. The Hebrew language was revived and became a living tongue. Hebrew literature sprang up, aspiring to take a place among the great literatures of the world. Hebrew writings were translated into modern languages. The masterpieces of English literature were rendered into Hebrew. Hebrew songs, newspapers, and textbooks were current. School children were instructed in Hebrew, despite the endeavors of the Young Turks to make Turkish the principal language of the country, and in active opposition to the propaganda carried on by the German, French, and English schools established in the Holy Land. Notable among the foreign institutions were the schools of the Alliance Israélite and the Hilfsverein der Deutschen Juden, a French and a German organization, respectively. The former employed French as a language of instruction; the latter, German. Neither of these bodies had, however, sufficient comprehension of the new life that was budding in Palestine. The policy pursued by the men in charge of foreign schools made it easy for the truly nationalistic schools to gain ground and supersede the older institutions. No foreign rivalry could crush the efforts of those who regarded Hebrew as the language of their own and strove to develop it in the land of its origin.

December 10, 1913, marks a new era in Hebrew education. That was the day when not only the language question but the whole policy of Jewish education in Palestine was definitely settled. The immediate cause of this turn of affaris was the decision of the German Hilfsverein with regard to the language of instruction in schools supported by that body. Contrary to its previous policy, the Hilfsverein began to neglect the study of Hebrew and pushed it more and more to the background. This caused much discontent among teachers and pupils nationalistically inclined. The climax was reached in December, 1913, when the Verein passed a resolution to the effect that the language of instruction in the new Technicum at Haifa, then under construction, should be German. A general walkout in all the schools of the Verein followed, with the result that the best forces in the teaching staff went over to the Hebrew schools and helped in spreading the ancient culture of their own. The attitude of the pupils was no less remarkable. Over 50 per cent of the total number joined the national schools, where instruction was given in their own tongue. An immediate consequence of the Hilfsverein's action was the creation of the educational committee, which sprang up in time of struggle. The aim of this committee was to establish order and cope with the situation created by the split. Its efforts were directed toward building up a school system truly representative of the best wishes of the people. New elementary schools were opened and conducted along modern lines in all the towns of Palestine. In Jerusalem, Jaffa, and Haifa, national schools replaced the old institutions maintained by private philanthropy, which were forced to close their doors. These new schools grew rapidly and attracted large sections of the population who had held aloof from the semi-Hebrew schools of the Hilfsverein.

In agricultural colonies conditions differed. The colony schools, though subsidized from abroad, were not maintained by foreign organizations. They came into existence with the colonies themselves and reflected the spirit that animated the settlers. At the outset of the war elementary schools existed in each of the 30 colonies of Palestine. The language of instruction in all these schools is Hebrew. The program of the colony schools comprises the usual elementary school subjects, in addition to lessons in religion, Bible, and Jewish history. Arabic is also taught, as knowledge of this language is indispensable in Palestine. In some of the colonies instruction in French is given. This is due to the fact that many of the colonies were for some time under the control of the Jewish Colonization Association, a French institution which subsidized the schools. Fortunately, the subsidy carried with it no interference in the internal management of the schools. This was left entirely to the colonists. The colony schools sprang up independently of one another and differed widely in method and character. Some had only elementary classes, others with a larger school population had a well-equipped elementary school, with eight classes and a kindergarten attached to it. Of recent years the teachers' association, which performs the function of a board of education, set a certain standard for these schools. This body appoints teachers for the colony schools and furthers educational development by publishing Hebrew textbooks and a Hebrew educational periodical, Ha-Chinnuch. It is noteworthy that all national Hebrew schools have been organized and conducted by a local committee of parents and teachers. This committee drafts the program of the school, subject to the approval of the Hebrew Teachers' Association. Schools of the elementary type are the only schools in agricultural colonies. The colonies, though growing rapidly, were not large enough to provide for secondary instruction. This was introduced in the two large cities, Jaffa and Jerusalem. Though not directly founded by the Zionist organization, the secondary schools are the product of the Zionist spirit.

SECONDARY EDUCATION.

The gymnasium in Jaffa, as the secondary school is called, has four preparatory and eight regular classes. After the fifth year the curriculum branches off into the classical and the so-called "real" course. The program of the gymnasium includes, in addition to the ordinary high-school program, the study of the Bible, the Talmud, Turkish, and Arabic. Emphasis is laid on gymnastics and the excursions which form an important item in all the national schools. The rapid development of the Hebrew high school in Jaffa is graphically described by Dr. Mossinsohn, one of its leaders and inspirers, in the Menorah Journal, December, 1918. Opened in 1906 with 17 pupils and 4 teachers, it grew so rapidly that in the latter part of 1914 it enrolled 900 pupils and 30 teachers. The curriculum is given in Hebrew exclusively, and the diplomas of the school are recognized by most of the American and foreign universities. In the last few years the popularity of the school was so great that it was almost entirely sustained by the income derived from tuition. The gymnasium in Jerusalem, organized in 1908 and patterned after that in Jaffa, had a somewhat slower development. Both high schools are coeducational. Important from the point of view of a national system of education was the establishment of a school for kindergartners with a three-year course in Jerusalem and a technical high school at Haifa. Both were opened in 1914 by the educational committee, as a result of the controversy with the Hilfsverein. The Haifa school was opened in place of the proposed Technicum. It is coeducational and aims to give students a technical training. The original idea of building a higher technical institution in Palestine has not been abandoned. Those interested in the project hope to realize it as soon as an opportune moment presents itself. There are, of course, in Palestine a number of Jewish schools with a decidedly religious bias. These schools are orthodox in spirit and hostile to modern innovations. Their chief aim is to foster the Jewish religion and to keep it intact from foreign influences.

Of special schools the musical conservatories, called Shulammith schools, in Jaffa and Jerusalem deserve mention. These schools have contributed greatly to the revival of Jewish music by arranging concerts and issuing collections of old and new songs. An important national school for the promotion of Jewish art is the Bezalel School of Arts and Crafts, founded by the artist Boris Schatz. The subjects taught in the school are carpet weaving, filagree silver work, carving, lithography, lace making, etc.

AGRICULTURAL TRAINING.

The provision for agricultural training, so important for the colonies, is wholly inadequate. The Mikveh Israel Agricultural School, established in 1870 by the Alliance Israélite Universelle, near Jaffa, has an annual budget of about $10,000. The language of instruction is French, the course of study lasts four years, and the curriculum is intended to turn out professional agronomists, who seek positions as inspectors, supervisors, landscape gardeners, and teachers at other schools. As there is no field for these agronomists in Palestine, many graduates go into other callings or leave the country. The Petach-Tikvah Agricultural School, established in 1912, has a very ambitious four years' program which includes Hebrew, French, Arabic, mathematics, history, geography, chemistry, botany, physics, surveying, meteorology, zoology, geology, and mineralogy; soil chemistry, the installing of plantations, cattle raising, medicine, dairying, plant pathology, administration of farms, agrarian law, commercial law, etc. To practical work only two hours a week are assigned. Thus neither the old Mikveh Israel School nor the more recent Petach-Tikvah Agricultural School has succeeded in working out a program suited for the colonies. A unique undertaking is the farm school for girls at Kinneret, near the sea of Tiberias, supported by a Jewish women's organization. Candidates must be at least 17 years old. The pupils enjoy free tuition, board and lodging, as well as a monthly stipend. The work is predominantly practical, the pupils being occupied from seven to nine hours daily. The subjects taught in the first year are botany, elementary chemistry and physics, cooking and preserving, and in the second the elements of scientific agriculture, fertilizing methods, plant diseases, the principles underlying various crops, poultry raising, cattle breeding, and the care of dairy products. The school has for its use 16 acres of land for ornamental gardening, forestry, and a barnyard. All the work of the farm is done by the pupils, also the sewing and cooking required for the institution.

This was in brief the state of Hebrew education in Palestine before the war broke out. The effects of the war were in many instances disastrous for the newly established school system. Schools were turned into hospitals, teachers were banished, funds failed to arrive, and pupils were driven from place to place. Yet there was a dogged determination to keep the schools open at any cost. This often necessitated the feeding and care of children. When the population was banished from their own homes, schools were opened in the refugee camps. At present a Zionist board of education administers the national schools in Palestine and subsidizes all Jewish schools on two conditions: That Hebrew be the language of instruction and that there be a certain standard of hygiene and sanitation. Funds are supplied from abroad.

ESTABLISHMENT OF A UNIVERSITY.

Every effort is made to organize a unified national Hebrew school system headed by a Hebrew university, where Jewish culture may thrive freely. A higher educational institution is thus far lacking, though Zionists and other Jewish circles have dreamed of such an institution for a number of years. When Russian universities closed their doors to thousands of Jewish students, these were compelled to seek higher education in foreign countries. Many went to Swiss, others to German and French universities. It was then proposed to build a university for Jewish young men and women. But opinions differed. Some chose Switzerland as the land where such a university could flourish. Others who had a definite aim in view and looked forward to the revival of the Jewish culture pointed to Palestine as an appropriate center. Things were unsettled when in July, 1913, negotiations were begun for the purchase of a site in Palestine, but these were necessarily suspended when the war broke out. The declaration of the British Government of November 2, 1917, on behalf of the Jewish home in Palestine gave new impetus to the movement and spurred the Zionists to renewed educational activities. Their efforts have been crowned with success. Palestine is to have a Hebrew university. In March, 1918, a Zionist commission headed by Dr. Weizmann was sent to the Holy Land under the auspices of the British Government. The object of this commission was, among other things, "To inquire into the feasibility of the scheme of establishing a Jewish university." The inquiry proved so satisfactory that a few months later, i. e., on July 24, 1918, the commission found it advisable to take the initial steps in laying the corner stones of the future university. Representatives of the Christian, Moslem, and Jewish creeds were present at the ceremony, and thus emphasized the cultural value of a higher institution in Palestine. In his speech delivered at the laying of the foundation stones, Dr. Weizmann has defined the new institution as a "Hebrew university," for he continues, "I do not suppose that there is anyone here who can conceive of a university in Jerusalem being other than Hebrew." Speaking further of the program, he thus defines it:

> I have spoken of a Hebrew university where the language will be Hebrew, just as French is used at the Sorbonne or English at Oxford. Naturally other languages, ancient and modern, will be taught in their respective faculties. Amongst these we may expect that prominent attention will be given to Arabic and other Semitic languages. A Hebrew university, though intended primarily for Jews, will, of course, give affectionate welcome to the members of every race and every creed. "My house is a house of prayer for all nations."
>
> Besides the usual schools and institutions which go to form a modern university, it will be peculiarly appropriate to associate with our Hebrew university archæological research, which has revealed so much of the mysterious past of Egypt and of Greece and has a harvest still to be reaped in Palestine. Our university is destined to play an important part in this field of knowledge. Side by side with scientific research the humanities will occupy a distinguished place.

In conclusion Dr. Weizmann pointed out that the Hebrew university, while devoting its activities to the higher scientific achievements, will—

> at the same time be rendered accessible to all classes of the people. The Jewish workman and farm laborer must be enabled to find there a possibility of continuing his education in his free hours; the doors of our libraries, lecture rooms, and laboratories must be opened wide to all. Thus the university will exercise its beneficial influence on the nations as a whole.

Before the political structure of a new nation that is yet old had time to grow, before the foundation of such a structure could be laid or even conceived under existing conditions, there looms thus from the distant Orient a spiritual creation of the Jews, a creation that promises to take a prominent place alongside the great institutions of learning in our own and in other countries.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1919, No. 35

THE JUNIOR COLLEGE

By

F. M. McDOWELL
GRACELAND COLLEGE, LAMONI, IOWA

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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